APPENDIX E: Pertinent Correspondence

LAKE WORTH INLET
Palm Beach Harbor

Lake Worth Inlet, Palm Beach Harbor
Draft Feasibility Report and Environmental Impact Statement
Comment Letters

maggot in turnip and rutabaga production. The applicant indicates that fipronil has been shown to provide excellent crop safety, and overall provides better control than the registered alternative.

The Applicant proposes to make no more than one application at 4.16 fluid oz. of product per acre, to a maximum of 600 acres of rutabagas and turnips, for use of up to a potential maximum of 19.5 gallons of product. Applications would potentially be made from April 1 through September 30, 2013, in the Oregon counties of Clackimas, Marion, Multnomah, and Umatilla.

This notice does not constitute a decision by EPA on the application itself. The regulations governing FIFRA section 18 require publication of a notice of receipt of an application for a specific exemption proposing a use which is supported by the IR–4 program and has been requested in 5 or more previous years, and a petition for tolerance has not yet been submitted to the Agency. The notice provides an opportunity for public comment on the application. The Agency will review and consider all comments received during the comment period in determining whether to issue the specific exemption requested by the Oregon Department of Agriculture.

List of Subjects

Environmental protection, Pesticides and pests.

Dated: April 12, 2013.

Daniel J. Rosenblatt,

Acting Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 2013–09285 Filed 4–18–13; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–9008–7]

Environmental Impacts Statements; Notice Of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–7146 or *http://www.epa.gov/compliance/nepa/.*

Weekly receipt of Environmental Impact Statements

Filed 04/08/2013 Through 04/12/2013 Pursuant to 40 CFR 1506.9.

Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *http://www.epa.gov/compliance/nepa/eisdata.html.*

EIS No. 20130089, Draft EIS, USFS, ID, Clear Creek Integrated Restoration Project, Comment Period Ends: 06/03/2013, Contact: Lois Hill 208–935–4258.

E*IS No. 20130090, Final EIS, USACE, CA,* Eagle Rock Aggregate Terminal Project, Review Period Ends: 05/20/2013, Contact: John W. Markham 805–585–2150.

EIS No. 20130091, Draft EIS, USFWS, NPS, 00, Niobrara Confluence and Ponca Bluffs Conservation Areas Land Protection Plan, Comment Period Ends: 06/03/2013, Contact: Nick Kaczor 303–236–4387. The U.S. Department of the Interior's Fish and Wildlife Service and the National Park Service are joint lead agencies for this project.

EIS No. 20130092, Draft EIS, USFS, OR, West Bend Vegetation Management Project and Forest Plan Amendments, Comment Period Ends: 06/03/2013, Contact: Beth Peer 541–383–4769.

EIS No. 20130093, Draft EIS, USACE, FL, Lake Worth Inlet, Palm Beach Harbor Project, Comment Period Ends: 06/03/2013, Contact: Angela Dunn 904–232–2108.

EIS No. 20130094, Draft Supplement, DOE, 00, Long-Term Management and Storage of Elemental Mercury Facilities, Comment Period Ends: 06/03/2013, Contact: David Levenstein 301–903–6500.

EIS No. 20130095, Second Draft Supplement, USFS, CA, Tehachapi Renewable Transmission Project, Comment Period Ends: 06/03/2013, Contact: Lorraine Gerchas 626–574–5281.

EIS No. 20130096, Draft Supplement, USFS, WY, Long Term Special Use Authorization for Wyoming Game and Fish Commission to Use National Forest System Lands for their Winter Elk Management Activities at Alkali Creek Feedground, Comment Period Ends: 06/03/2013, Contact: Pam Bode 307–739–5513.

EIS No. 20130097, Final EIS, STB, CA, ADOPTION—California High-Speed Train: Merced to Fresno Section, Review Period Ends: 05/20/2013, Contact: David Navecky 202–245–0294. U.S. Department of Transportation's Surface Transportation Board (STB) has adopted the Federal Railroad Administration's FEIS #20120118, filed 04/18/2012. The STB was not a cooperating agency for the above FEIS. Recirculation of the document is necessary under Section 1506.3(b) of the CEQ Regulations.

EIS No. 20130098, Draft EIS, FAA, TX, SpaceX Texas Launch Site, Comment Period Ends: 06/03/2013, Contact: Stacey M. Zee 202–267–9305.

EIS No. 20130099, Final EIS, USFWS, OH, Proposed Habitat Conservation Plan and Incidental Take Permit for the Indiana Bat (Myotis sodalis) for the Buckeye Wind Power Project, Review Period Ends: 05/20/2013, Contact: Megan Seymour 614–416–8993 ext. 16.

Amended Notices

EIS No. 20130031, Draft EIS, USN, CA, U.S. Navy F–35C West Coast Homebasing, Comment Period Ends: 05/07/2013, Contact: Amy Kelley 619–532–2799. Revision to FR Notice Published 2/15/201; Extending Comment Period from 4/22/2013 to/5/7/2013.

EIS No. 20130044, Draft EIS, FHWA, NV, Pyramid Way and McCarran Boulevard Intersection Improvement Project, Comment Period Ends: 04/30/2013, Contact: Abdelmoez Abdalla, 775–687–1231. Revision to FR Notice Published 04/11/2013; Extending Comment Period from 4/15/2013 to 04/30/2013.

Dated: April 16, 2013.

Cliff Rader,

Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2013–09280 Filed 4–18–13; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2013–0026; FRL–9383–8]

Pesticide Products; Registration Applications for New Active Ingredients

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has received several applications to register pesticide products containing active ingredients not included in any currently registered pesticide products. Pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA is hereby providing notice of receipt and opportunity to comment on these applications.

DATES: Comments must be received on or before May 20, 2013.

ADDRESSES: Submit your comments, identified by docket identification (ID) number and the EPA File Symbol of interest as shown in the body of this

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 19 2013

Ms. Lauren P. Milligan
Florida Department of Environmental Protection
State Clearinghouse
3900 Commonwealth Boulevard, MS 47
Tallahassee, Florida 23299-3000

Dear Ms. Milligan,

Pursuant to the National Environmental Policy Act, enclosed for State agency review and comment are 10 CDs of the Draft Integrated Feasibility Report and Environmental Impact Statement (FR/EIS) for the Lake Worth Inlet Feasibility Project. The project is located in Palm Beach County, Florida.

Any comments that you may have on the Draft FR/EIS must be submitted in writing to the letterhead address within 45 days from the date on which the Notice of Availability appears in the Federal Register, which is expected to occur on April 19, 2013.

Any questions concerning the project or Draft FR/EIS should be directed to Ms. Angela Dunn by telephone at 904-232-2108 or by email at Angela.E.Dunn@usace.army.mil.

Sincerely,

Eric P Summa
Chief, Environmental Branch

Enclosures

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 19 2013

To Whom It May Concern:

Pursuant to the National Environmental Policy Act (NEPA, 40 CFR 1500-1508) and the U.S. Army Corps of Engineers (Corps) Regulation (33 CFR 230.13), this letter constitutes the Notice of Availability of the Lake Worth Inlet Feasibility Project Draft Integrated Feasibility Report and Environmental Impact Statement (FR/EIS). The project is located in Palm Beach County.

The Draft FR/EIS is available for review on the Corps' Environmental website, under Palm Beach County, at:

http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx

A printed copy of the report is also available for review in the reference section at the public library below:

PALM BEACH GARDENS BRANCH
PALM BEACH COUNTY LIBRARY
11303 CAMPUS DRIVE
PALM BEACH GARDENS, FLORIDA 33410

Any comments you may have on the Draft EIS must be submitted in writing to the letterhead address within 45 days from the date the NOA appears in the Federal Register, which is expected to occur April 19, 2013. Any questions concerning the project should be directed to Ms. Angela Dunn by telephone at 904-232-2108 or by email at Angela.E.Dunn@usace.army.mil.

Sincerely,

Eric P Summa
Chief, Environmental Branch

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

APR 19 2013

Dear Librarian,

Enclosed is one copy of the Lake Worth Inlet Feasibility Project Draft Integrated Feasibility Report and Environmental Impact Statement (FR/EIS). The project is located in Palm Beach County. The report is being provided for public review pursuant to the National Environmental Policy Act. We request that you make the copy available for public viewing in the reference section of your library for a period of 60 days, after which it may be disposed.

Thank you for your assistance in this matter. If you have any questions or need further information, please contact Ms. Angela Dunn by telephone at 904-232-2108 or by email at Angela.E.Dunn@usace.army.mil.

Sincerely,

Eric P Summa
Chief, Environmental Branch

Enclosure

Federal Agency Comment Letters

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
http://sero.nmfs.noaa.gov

MAY 28 2013

F/SER4:JK/pw

Colonel Alan Dodd, Commander
U.S. Army Corps of Engineers, Jacksonville District
Jacksonville Regulatory Office, South Permits Branch
PO Box 4970
Jacksonville, Florida 32232

Attention: Angela Dunn

Dear Colonel Dodd:

NOAA's National Marine Fisheries Service, Southeast Region, Habitat Conservation Division (NMFS HCD) reviewed the draft Environmental Impact Statement (DEIS) dated April 2013 for Lake Worth Inlet, Palm Beach Harbor, Palm Beach County, Florida. The U.S. Army corps of Engineers Jacksonville District (District) is the lead federal agency and the Port of Palm Beach is the non-federal cost sharing partner for the project. The DEIS describes a tentatively selected plan (TSP) that includes deepening the entrance channel from 35 to 41 feet and widening from 300 to 450 feet; deepening the main turning basin from 29 to 33 feet and extending the southern boundary of the turning basin an additional 150 feet[1]. Suitable dredged material would be used beneficially for mitigation or nearshore placement and unsuitable material would be placed in the Palm Beach Ocean Dredged Material Disposal Site. The overall purpose of the project is to deepen and widen the channel to allow "modern size" vessels (i.e., post-panamax class) access that is not inhibited by light loading, tidal delays, and maneuvering difficulties. The District states 4.9 acres of hardbottom and 4.5 acres of seagrass habitat would be affected through implementation of the TSP; however, the District did not provide an initial determination regarding the effects of the proposed action on federally managed fisheries or essential fish habitat (EFH), including seagrass and hardbottom, which the South Atlantic Fishery Management Council (SAFMC) designated as a Habitat Area of Particular Concern (HAPC). NMFS believes the impacts of the proposed project, along with adjacent and nearby projects, will be much greater and adversely affect EFH. Furthermore, the District concludes that any cumulative impacts are negligible and not significant, and NMFS disagrees with this determination. Through separate applications, the District (Regulatory Division) estimates an additional 20 acres of seagrass habitat may be impacted in this area of Lake Worth Lagoon associated with plans to deepen and widen portions of the Intracoastal Waterway (ICW) and nearby marinas modifying their basins and ICW access channels[2]. As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, the following comments and recommendations are provided pursuant to authorities of the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). While we remain hopeful that we can reach

[1] The TSP and project components are depicted in Figure 1.
[2] The District's estimate of 20 acres was provided to NMFS via an email dated April 17, 2013.

agreement on those issues affecting NMFS trust resources, due to the magnitude and extent of the expected impacts to EFH, lack of adequate compensatory mitigation options, and the need for a complete EFH assessment, we maintain our right to exercise Section 50 CFR 600.920(k), which says "the Assistant Administrator for Fisheries may request a meeting with the head of the federal agency, as well as with any other agencies involved, to discuss the action and opportunities for resolving any disagreements".

Consultation History

- March 14, 2008: NMFS HCD and Protected Resources Division (PRD) accepted the District's invitation, dated February 22, 2008, to participate as a cooperating agency for the development of this EIS. We also accepted the invitation from the project manager to serve on the Project Delivery Team. In our correspondence we emphasized that this is an important project for us, most notably because the impacts to seagrass from this project, including impacts to Johnson's seagrass (*Halophila johnsonii*) which is protected under the Endangered Species Act (ESA), may be substantial.
- May 12, 2008: NMFS HCD and PRD participated in an interagency coordination meeting held at the Port of Palm Beach to discuss the scope of the Palm Beach Harbor Feasibility Study and environmental issues.
- June 17, 2008: NMFS HCD and PRD provided comments to representatives of the District and Port of Palm Beach on the scope of work for the Port of Palm Beach Feasibility Study Environmental Resource Survey, which was provided by email on June 6, 2008.
- August 25, 2008: NMFS participated in an interagency field trip to examine seagrass and hardbottom habitats within the inner entrance channel, inner channel, and turning basin.
- September 25, 2009: NMFS HCD and PRD provided comments to the District on the report from the Palm Beach Harbor Navigation Feasibility Study Environmental Resource Survey (referred to as PBSJ 2009) provided to us by letter dated April 24, 2009. In this letter, we provided detailed comments on survey results from hardbottom mapping and characterization, *Acropora* surveys, and seagrass mapping and characterization. In this letter, we pointed out several of our recommendations were not incorporated into either the field survey or report, and the report lacks the detail necessary for NMFS to fully evaluate the extent of impacts to NOAA trust resources, especially hardbottom and coral communities, which would likely impede use of the report for development of the EIS, EFH Assessment, and Biological Assessment.
- September 26, 2012: In response to a request from NMFS, the District provided an update on the project via webinar.
- October 3, 2012: The District provided NMFS with an updated seagrass and hardbottom survey report based on studies conducted in 2011 (DCA 2012).

Essential Fish Habitat within the Project Area

Seagrass, hardbottoms, unvegetated estuarine bottom, and coastal inlets are located in the project area. SAFMC has designated seagrass and hardbottom as HAPCs for species managed under the fishery management plan (FMP) for snappers and groupers, including adult white grunt (*Haemulon plumieri*), juvenile and adult gray snapper (*Lutjanus griseus*), juvenile mutton snapper (*L. analis*), lane snapper (*L. synagris*), and schoolmaster snapper (*L. apodus*). Seagrass

is also EFH for brown shrimp (*Farfantepenaeus aztecus*) and pink shrimp (*F. duorarum*). Seagrass habitats directly benefit the fishery resources of Lake Worth Lagoon by providing nursery habitat. Seagrass habitats are part of a habitat complex that includes mangroves and hardbottom, and this habitat complex supports a diverse community of fish and invertebrates within the area. Seagrass also provides important water quality maintenance functions (such as pollution uptake), stabilize sediments, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. SAFMC has designated estuarine bottom as EFH for cobia (*Rachycentron canadum*), black seabass (*Centropristis striata*), king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*S. maculates*), spiny lobster (*Panulirus argus*), and pink shrimp. SAFMC provides additional information on EFH and HAPCs and how they support federally managed fishery species in the document, *Fishery Ecosystem Plan of the South Atlantic Region*, which is available at *www.safmc.net*.

It should be noted the project area is adjacent to Lake Worth Inlet, which SAFMC has designated as an HAPC under the FMP for snappers and groupers, as well as the FMP for penaeid shrimp. Tidal inlets are HAPCs because of their role as migration corridors for larvae entering estuaries and for juveniles and sub-adults exiting estuaries for further development within marine habitats. HAPCs, such as seagrass and hardbottom, in close proximity to inlets are thought to be especially valuable because they provide a refuge from predators during migration.

EFH Assessment Information Needs

An EFH assessment is provided as Attachment 7 to the DEIS. We note that this document contains numerous direct quotes from the report, *Characterization of Essential Fish Habitats in the Port Everglades Expansion Area*. NMFS provided this report to the District on June 3, 2011, for a separate port expansion project. We acknowledge this report, if appropriately cited, can be used in sections of the DEIS and EFH assessment that characterize habitats in the project area, but the report by itself does not constitute an EFH assessment. This document is incomplete. The requirements of an EFH assessment are listed at 50 CFR 600.920(e) and include four mandatory contents for all EFH assessments and several additional elements that are appropriate for projects that would have especially significant impacts on EFH.

Our comments below focus first on the required components of an EFH assessment. Mandatory Contents of an EFH Assessment listed at 50 CFR 600.920(e)(3):

1. *Description of the action*
   The DEIS includes the required description.

2. *Analysis of the potential adverse effects of the action, including cumulative effects, on EFH and the managed species*
   Two habitat mapping and biological resource surveys were completed for this project. The first survey was performed in June to October 2008 (summarized in the report, PBSJ 2009). An additional survey was performed in August 2011 (summarized in the report, DCA 2012). The EFH assessment should be updated to describe notable differences between the 2008 and 2011 survey events including seagrass species composition along the southern and eastern

sides of the main turning basin. The 2008 survey identified monospecific beds of *Halophila decipiens*; whereas the 2011 survey reported a mix of *H. decipiens, H. johnsonii,* and *Halodule wrightii*. Additionally, the EFH assessment should be updated to describe differences in seagrass distribution and hardbottom exposure in 2008 and 2011.

Seagrass impacts: The EFH assessment states that for impact assessment purposes, it is important to consider the broader seagrass habitat and not just the currently vegetated portions; however, the DEIS describes impacts to seagrass based only on the 2011 survey event (DCA 2012). As mentioned above, NMFS believes the District underestimated the amount of seagrass that would be impacted. Spatial tools were used to examine the changes in seagrass coverage between 2008 and 2011. NMFS determined that the 2008 survey documented 3.6 acres of seagrass, and the 2011 survey documented 4.5 acres of seagrass. Based on this analysis, the total mapped seagrass habitat in the Lake Worth Inlet expansion area is 5.5 acres. Figure 2 illustrates the results from this analysis in one assessment area along the south expansion of the main turning basin.

Hardbottom impacts: A similar analysis was completed to examine hardbottom exposure. Spatial tools were used to examine the changes in exposure between 2008 and 2011. NMFS determined that the 2008 survey documented 6.6 acres of hardbottom; and the 2011 survey documented 3.5 acres of hardbottom[3]. Based on this analysis, the cumulative hardbottom exposure in the Lake Worth Inlet expansion area is 7.3 acres. Figure 3 illustrates the results from this analysis in one assessment area along the north edge of the inner entrance channel.

Other EFH impacts: Impacts to unvegetated estuarine bottom and coastal inlets are described qualitatively in the EFH assessment. However, information is not provided on the number of acres impacted or how these acres will be impacted by the proposed project to quantify impacts to these habitats.

Cumulative effects: Many areas in the Lake Worth Lagoon that would otherwise be suitable for seagrass colonization have been lost due to dredging and filling activities (Harris et al. 1983). As indicated earlier, the District (Regulatory Division) estimates an additional 20 acres of seagrass habitat may be impacted. Of this additional 20 acres, the District has received three applications, and published two public notices, totaling 14.7 acres of seagrass that may be impacted. Work described in Public Notices SAJ-2012-01719 (applicant, Florida Inland Navigation District)[4] and SAJ-2008-1808 (applicant, RBYC)[5] has already been elevated in accordance with the MOA between the Department of Commerce and Department of the Army. The District also believes that 5.3 acres of seagrass impacts will result from four reasonably foreseeable nearby marinas (New Port Cove, Viking Yachts, Jamco, and Lockheed Martin) requesting new or deepened access channels. The District's April 17, 2013 e-mail further describes how it estimated the additional seagrass impacts that

[3] Note that DCA 2012 either did not survey or identify hardbottom in the inner entrance channel or the southern expansion of the main turning basin.

[4] NMFS provided letters to the District on April 26, 2013, and May 20, 2013; these letters were provided in accordance with Part IV, Section 3(a) and 3(b) of the MOA between the Department of Commerce and Department of the Army, dated August 11, 1992.

[5] NMFS provided letters to the District on August 2, 2012, and August 14, 2012; these letters were provided in accordance with Part IV, Section 3(a) and 3(b) of the MOA between the Department of Commerce and Department of the Army, dated August 11, 1992.

may result from deepening the ICW immediately adjacent to the project component identified as the north turning basin in Figure 1.

3. *Federal agency's conclusions regarding the effects of the action on EFH*
   The DEIS and EFH assessment does not provide this determination.

4. *Proposed mitigation, if applicable*
   A conceptual mitigation plan is provided as Appendix D to the DEIS. This plan describes four potential sites for seagrass mitigation and eight potential sites for hardbottom mitigation. However, the DEIS does not identify sites in closer proximity to the proposed project. Based on the limited information provided, NMFS does not believe the plan contains information to support these sites as viable mitigation options. For example, we do not believe seagrass preservation or seagrass recruitment along a shoal would offset the permanent losses that would result from dredging seagrass habitat. We also do not believe construction of a breakwater would offset impacts to natural hardbottom habitats; nor do we believe limestone boulder piles would replace lost functions of hardbottom ledge habitat or low-profile natural hardbottom habitats. The conceptual mitigation plan requires additional detail and options to support what is presented. Information is lacking to determine the likely success of the proposed mitigation.

Other sites described in the mitigation plan are not viable replacement habitat due to the location of the mitigation site with respect to location of impacted habitat. For example, the Turtle Cove seagrass mitigation site is approximately 5 miles north of the inlet and the Ibis Isles seagrass mitigation site is approximately 8.5 miles south of the inlet. Scientific literature describes the value of seagrass proximity to an inlet and the gradient in faunal and fish communities occurs within approximately 3 miles as one proceeds away from the inlet (Gilmore 1995). Based on work completed in the Indian River Lagoon, which is the next major estuary to the north, Gilmore (1995) determined that seagrass habitats near ocean inlets offer optimum physical conditions with low variation in temperature and salinity and other physical parameters, as well as proximity to ocean spawning sites for reef species. Therefore, seagrass habitats near inlets provide habitat for the most diverse fish communities. Other studies (e.g., Bushon 2006; Turtora and Schotman 2010) have also linked species distribution and life history stages as a function of proximity to a coastal inlet. The proximity of seagrass to the Lake Worth Inlet increases the value of the seagrass habitats located near the inlet, in particular for oceanic and estuarine spawners. Habitat value during growth to maturity for two federally managed species, gray snapper (*Lutjanus griseus*) and bluestriped grunt (*Haemulon sciurus*) is a function of distance from an ocean inlet (Faunce and Serafy 2007). For example, the planktonic larvae of gag grouper (*Mycteroperca microlepis*) move into estuaries and settle in the first available habitat, such as seagrass beds near inlets (Ross and Moser 1995).

EFH Recommendation

NMFS finds the project would adversely impact EFH. Due to the magnitude and extent of the expected impacts to EFH, lack of adequate compensatory mitigation options, and the need for a

complete EFH assessment, we maintain our right to exercise Section 50 CFR 600.920(k), which says "the Assistant Administrator for Fisheries may request a meeting with the head of the federal agency, as well as with any other agencies involved, to discuss the action and opportunities for resolving any disagreements". In addition, section 305(b)(4)(A) of the Magnuson-Stevens Act requires NMFS to provide EFH conservation recommendations when an activity is expected to adversely impact EFH. Based on this requirement, NMFS provides the following:

EFH Conservation Recommendation

Prior to dredging seagrass and hardbottom habitat to expand the Lake Worth Inlet and Port of Palm Beach, NMFS recommends the following:

1. The District shall update the DEIS or EFH assessment to describe no less than 5.5 acres of seagrass habitat impacts.
2. The District shall update the DEIS or EFH assessment to describe no less than 7.3 acres of hardbottom impact.
3. The District shall provide an assessment that quantifies direct and indirect impacts to unvegetated estuarine bottom and the Lake Worth Inlet as a coastal inlet and EFH.
4. The District shall require use of best management practices to avoid and minimize the degradation of water quality and minimize impacts to hardbottoms and seagrass habitat, including the use of staked turbidity curtains around the work areas, marking of seagrass and hardbottom habitat to facilitate avoidance during construction, and prohibiting staging, anchoring, mooring, and spudding of work barges and other associated vessels over seagrass and hardbottom. These BMPs shall be coordinated with NMFS for approval prior to commencement of any work.
5. The District shall update the cumulative impact assessment to describe the impact on the Lake Worth Lagoon environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.
6. The District shall provide an updated mitigation plan that describes how unavoidable impacts to seagrass and hardbottom habitat shall be offset from port expansion activities. This plan should include clearly defined performance standards, monitoring protocols and schedule, and a functional assessment (e.g., Unified Mitigation Assessment Method, UMAM) that demonstrates how mitigation amounts offset the resource impacts. The plan shall address how the site selection for mitigation locations is supported by the best available literature. This plan shall be coordinated with NMFS for approval prior to commencement of any work.

Section 305(b)(4)(B) of the Magnuson-Stevens Act and implementing regulation at 50 CFR Section 600.920(k) require the Jacksonville District to provide a written response to this letter within 30 days of its receipt. If it is not possible to provide a substantive response within 30

days, in accordance with NMFS' "findings" with the District, an interim response should be provided to NMFS. A detailed response then must be provided prior to final approval of the action. The detailed response must include a description of measures proposed by the District agency to avoid, mitigate, or offset the adverse impacts of the activity. If your response is inconsistent with our EFH conservation recommendation, the District must provide a substantive discussion justifying the reasons for not following the recommendation.

Please note the project proposes actions in areas where Johnson's seagrass is present. Because Johnson's seagrass is protected under the provisions of the ESA, the District should contact the NMFS Southeast Region, PRD, if the District determines that their permitted action would affect a listed species. The NMFS Southeast Region, PRD can be contacted at the letterhead address.

Thank you for the opportunity to provide comments. Related questions or comments should be directed to the attention of Ms. Jocelyn Karazsia at 400 North Congress Avenue, Suite 120, West Palm Beach, Florida, 33401. She may be reached by telephone at 561-616-8880 x207 or by e-mail at Jocelyn.Karazsia@noaa.gov.

Sincerely,

Virginia M. Fay
Assistant Regional Administrator
Habitat Conservation Division

cc:
CESAJ, Leah.A.Oberlin@usace.army.mil
FWS, Jeffrey_Howe@fws.gov
FWCC, Lisa.Gregg@MyFWC.com, Erin.McDevitt@MyFWC.com
FDEP, Benny.Leudike@dep.state.fl.us
EPA, Miedema.Ron@epa.gov
Palm Beach ERM, PDavis@pbcgov.org
SAFMC, Roger.Pugliese@safmc.net
F/SER3, Kay.Davy@noaa.gov
F/SER4, David.Dale@noaa.gov
F/SER47, Jocelyn.Karazsia@noaa.gov
F/SER, David.Keys@noaa.gov
PPI, Jay.Nunenkamp@noaa.gov

Literature Cited

Bushon, A.M. 2006. Recruitment, spatial distribution, and fine-scale movement patterns of estuarine-dependent species through major and shallow passes in Texas. M.S. Thesis, Texas A&M University-Corpus Christi, Corpus Christi, Texas.

Dial Cordy and Associates (DCA). 2012. Seagrass Survey, Federal Navigation Channel and Harbor Area, Lake Worth Inlet, Palm Beach Harbor, Florida. 28pp.

Faunce, C.H., and J.E. Serafy. 2007. Nearshore habitat use by gray snapper (*Lutjanus griseus*) and bluestriped grunt (*Haemulon sciurus*): environmental gradients and ontogenetic shifts. Bulletin of Marine Science 80: 473-495.

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Harris, B., K.D. Haddad, R.A. Steindinger, and J.A. Huff. 1983. Assessment of Fisheries Habitat: Charlotte Harbor and Lake Worth. Florida Department of Natural Resources, Tallahassee, Florida.

PBSJ. 2009. Palm Beach Harbor Navigation: Feasibility Study Environmental Resources Report. 81pp.

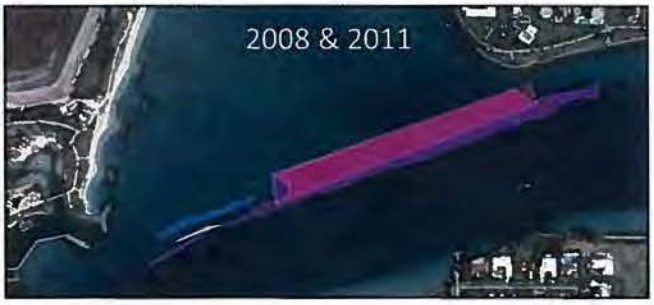
Ross, S.W. and M.L. Moser. 1995. Life history of juvenile gag, *Mycteroperca microlepis*, in North Carolina estuaries. Bulletin of Marine Science 56:222–237.

Turtora, M., and E.M. Schotman. 2010. Seasonal and Spatial Distribution Patterns of Finfish and Selected Invertebrates in Coastal Lagoons of Northeastern Florida, 2002-2004: U.S. Geological Survey Scientific Investigations Report 2010-5131, 90p.

Figure 1: The District's Tentatively Selected Plan. Figure ES-2 from the draft EIS.

Figure 2: Seagrass cover and impacts in the southern expansion of the main turning basin. The image on the left is modified from figure ES-2 in the EIS. The area circled in yellow and seagrass cover is illustrated in the images on the right. The top right image is seagrass cover reported in PBS&J 2009 (1.6 ac); the middle image is from DC&A 2012 (2.2 ac); the lower right image depicts cumulative seagrass cover (2.5 ac) in this area.

Figure 3: Hardbottom exposure along the northern edge of the inner channel. The image on the left is modified from figure ES-2 in the EIS. The area circled in yellow and hardbottom exposure cover is illustrated in the images on the right. The top right image is hardbottom reported in this area in PBS&J 2009 (4.2 ac); the middle image is from DC&A 2012 (3.2 ac); the lower right image depicts cumulative hardbottom exposure (4.6 ac) in this area.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

June 3, 2013

Mr. Eric Summa, Chief
Environmental Branch,
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

SUBJECT: Draft Integrated Feasibility Report and Environmental Impact Statement (FR/EIS), Lake Worth Inlet, Palm Beach Harbor, FL. CEQ No. 20130093

Dear Mr. Summa:

To fulfill the U.S. Environmental Protection Agency's (EPA's) Clean Air Act (CAA) § 309 and National Environmental Policy Act (NEPA) § 102(2)(C) responsibilities, the EPA has reviewed the above DEIS for the above proposed action by the U.S. Army Corps of Engineers (USACE): the FR/EIS (or 'DEIS').

Background

Lake Worth Inlet is the entrance channel to the Port of Palm Beach harbor connecting Lake Worth, a coastal lagoon with the Atlantic Ocean. The Port is located in Riviera Beach, Palm Beach County, Florida. The port consists of four wharves, 3 slips, and 17 berthing areas, and 156 acres of land.

Purpose & Need: The proposed action's objectives are to reduce transportation costs, caused by vessel light loading, tidal delays, or insufficient depth in the main turning basin and from the entrance channel to the inner channel; reduce navigation concerns and improve vessel safety in the harbor relating to insufficient width; and maintain or improve operations and maintenance dredging intervals within the Federal channel.

Description: The proposed action appears to have several components including deepening the inner channel from 33 to 39 feet, the entrance channel from 35 to 41 feet, and the Main Turning Basin from 33 to 39 feet and widening portions of the navigation channel.

Alternatives: This DEIS evaluated the *No Action* alternative, nine widening alternatives including a widening only alternative, and 10 deepening and widening alternatives at one foot depth increments from 34 to 43 feet.

Environmental Impacts: The widening of the channel component of the proposed action is the feature causing impacts to adjacent coastal seagrass and hardbottom communities within jurisdictional waters of the U.S. There are also potential short-term and long-term impacts to

water quality from construction and dredging activities, including salt-water intrusion. Additional information is needed concerning potential air quality impacts.

***EPA Summary Comments*:**

Under § 309, EPA is directed to review and comment publicly on the environmental impacts of Federal activities, including actions for which environmental impact statements are prepared. EPA is assigning this DEIS with an "Environmental Concerns" (EC-2) rating (Please see enclosed "Summary of the EPA Rating System") primarily for the requirement of additional information to understand the proposed action's need and its potential environmental impacts. EPA's review has identified specific natural resources impacts that should be avoided in order to fully protect the environment.

EPA has provided the enclosed specific technical comments to assist the District's preparation of the final EIS (FEIS). The DEIS made conclusions that were not always supported by the data provided. The enclosed comments highlight some of the issues that are identified for the purposes of the drafting the FEIS. Additional data should be provided in the FEIS that documents and addresses EPA's environmental concerns. EPA is also requesting additional information on proposed mitigation sites for potential impacts to waters of the U.S.

EPA recognizes the FR/EIS is one of four national pilots pursuant to the Deputy Commanding General for Civil and Emergency Operations' directive to complete all (new) feasibility studies within 18 months but no more than three years, at a cost of no more than $3 million, and of a 'reasonable' report size. EPA supports the USACE's effort to streamline its process. EPA also appreciates and recognizes the demands placed upon the District to prepare it with tight time and resource constraints. In general, EPA finds this pilot product lacks some of the data and supporting analyses that the USACE Jacksonville District typically provides in NEPA compliance efforts for its proposed projects. EPA is willing to provide further technical assistance during the USACE's preparation of the FEIS.

Thank you for the opportunity to review the DEIS. If you wish to discuss this matter further, please contact Beth Walls (404-562-8309 or walls.beth@epa.gov) or Christopher Militscher (404-562-9512 or militscher.chris@epa.gov) of my staff.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Environmental Accountability

Enclosure: Technical comments on Lake Worth FR/EIS
Summary of EPA's rating system

EPA Technical Comments on Draft FR/EIS
Lake Worth Inlet, Palm Beach Harbor, FL
CEQ No.: 20130093

Need

- **Clear identification of the need:** The FEIS should provide a section clearly identifying the need and purpose of the proposed action consistent with CEQ's NEPA regulations.
  - Information relevant to the need and proposed action are scattered throughout the document. EPA was required to review and evaluate numerous sections of the document to form a coherent understanding of the proposed project's purpose and need. For example, Figure ES-4 located in the executive summary is the only place where specific information on existing conditions and the proposed action's depth and widening seems to be provided. This information was not fully discussed in the alternatives discussions. See Alternatives and General comments below.
  - Conclusions from the different discussions were not supported by the appropriate economical and environmental information.
  - The Table of contents indicates Chapter 1 addresses the proposed action's need. While the word, *need*, is used several times in the pictures comprising Chapter 1, there is no clear explanation of the need or purpose.
- **Clear Identification of how the need has been addressed:** The FEIS should make it clear how the need is best addressed by the tentatively selected plan. For example, the DEIS describes how the ebb and flood tide and the Gulf Stream current have an important impact upon navigation (p. 2-1 and p. 2-16) resulting in navigation restrictions (summarized in Table 2-2). However, there is no discussion of how the proposed action will address these navigation restrictions and potentially improve upon the existing tide and current constraints.

Economics Analysis

- **Existing versus Projected Economy:** The FEIS should clarify whether the economic analysis demonstrating need and its national economic development and regional economic development accounts analyses are based upon existing port business or reflect expected increase in port business resulting from the proposed action. The DEIS is unclear with respect to the existing and future economy.
- **Need based on Non-Growth Commodities**: The FEIS should explain when compared to the containerized goods commodity type, why the DEIS focused on those commodities: cement, molasses, and petroleum, appearing to demonstrate minimal to no growth to demonstrate the proposed action's economic need and the selected design vessel type for the ship simulation study. See also Alternatives, **Ship Simulation** comments below.
  - Cement: is the only commodity demonstrating some growth of the three commodities listed. The DEIS forecasts a cement-import volume for 2067 of approximately 90,000 metric tons greater than that for 1997, which was approximately 250,000 metric tons. (Figures 2-2 & 2-3)
  - Molasses: the 2067 forecasted export of 265,000 metric tons of molasses is less than the 2002 peak export volume of approximately 350,000 metric tons. (Figures 2-2 & 2-3)

- Petroleum: the 2067 petroleum import projection of 348,000 metric tons is significantly less than the 2001 peak export volume of approximately 1,350,000 metric tons (Figures 2-2 & 2-3).
- Neither figure 2-2 nor 2-3 provide forecasted projections for the containerized-goods commodity type. See **missing information** comment below.
- According to Figure 2-1, cement, molasses, and petroleum combined accounted for 38 percent of the tonnage moving through the port compared to 37 percent associated with the containerized-goods commodity type. Cement, molasses, and petroleum combined accounted for 6.2 percent of the total vessel calls compared to the 73 percent represented by the containerized-goods commodity type.

- **Missing Information:** The Economic Environment Section (2.2) is lacking key economic information.
  - **Commodity Movement Forecasts:** The FEIS should provide commodity movement forecasts, i.e., include containerized cargo data in Figures 2-2 and 2-3. In the DEIS, neither figure contains commodity movement forecasts for containerized cargo. Containerized cargo represents the Port's largest tenant, Tropical Shipping, and according to Figure 2-1, the largest tonnage passing through the port and vessel call number.
  - **Commodity Economic Value Omission:** The FEIS should compare the economic value per ton of each commodity type analyzed in Section 2, Figure 2-1. While cement, molasses, petroleum, and sugar products are dense commodities by nature and would be expected to comprise a higher percent of the tonnage, it is unclear whether they are more valuable than the containerized cargo passing through the port. This information appears relevant to the determination of the proposed action's need and both the national and regional economic development accounts used to determine the tentatively selected plan. See Alternatives, **Alternative Plan Evaluation** comments below.
    - While Figure 2-1 compares the *2007 commodity type tonnage* with the *2007 vessel calls*, no information is provide on the 2007 commodity value for the respective commodities identified. Here, the *other* commodity category (cement, molasses, petroleum products, and sugar) are demonstrated to constitute 60 percent of the tonnage and 10 percent of the vessels calling at the port while the *containerized goods* category represents 37 percent of the tonnage and 73 percent of the vessel calls. Absent is the economic value of the *other* compared to the *containerized goods* commodities. Moreover, the Port's largest tenant and shipper of containerized goods, Tropical Shipping appears to provide half of the annual revenue at the Port of Palm Beach.[1]
  - **Sugar Data Omission:** The FEIS should explain why an important Port export commodity, sugar, was omitted from the economic need analysis and port deepening and widening alternatives analysis of Chapter 2, but discussed in Chapter 5 in context of the Tentatively Selected Plan's (TSP's) impacts.
    - 100% of the exported raw sugar produced in the Glades area, almost 900,000 tons, is shipped through the Port of Palm Beach.[2]
    - Section 2.2.1 indicates sugar is one of the four commodities comprising 60 percent of the tonnage passing through and 10 percent of the vessels calling at the Port.
      - Figure 2-1 indicates sugar's tonnage is 22 percent, greater than cement and molasses combined (10 percent) and second to petroleum imports at 28 percent.
      - Figure 2-1 indicates sugar represents 3.9 percent of the vessel calls, greater than cement and molasses combined (1.4 percent) and second to petroleum vessel calls at 4.8 percent.

- Vessels carrying sugar are omitted from the ship simulation study which selected the bulk design vessel representing the molasses and liquid petroleum-sized tanker and the cement bulk vessels.
- Figure 2-3 omits sugar export projections while Figures 2-1 and 2-2 provide sugar tonnage, vessel call, and annual cargo tons through the port information.
- Table 2-1 omits sugar from the draft constrained vessel characteristics by vessel type. The FEIS should clarify:
  - Whether sugar is omitted because its vessels are not draft constrained and that is why Table 5-1 indicates this commodity will not benefit from the proposed action.
  - Sugar does not appear to benefit from the proposed action. A rationale as to why it was included into the "other" category of Figure 2-1 should be provided in the FEIS.
  - Sugar is, however, included in the major bulk commodity tonnages associated with the deepest draft vessels calling at the port. (See Figure 2-2 and the first sentence on the page 2-3, which indicates Figure 2-2 reflects the deepest draft vessels calling at the port). A rationale for its inclusion in this general category should be included in the FEIS.
  - After subtracting sugar from the commodities requiring the deepest draft vessels, the proposed action appears to be focused on deep draft shipment of commodities representing 38 percent (not 60%) of the port's tonnage and 6.2 percent (not 10.1%) of the port's total vessel calls. (Figure 2-1)
- **Omission of the Rail Alternative:** The costs of shipping cement, molasses, petroleum, and sugar by rail to and from neighboring ports of Canaveral, Everglades, and Miami compared to the costs of the proposed action should be provided. A rail alternative comparing the deepening and widening alternative plus the corresponding need for the north jetty stabilization were not discussed in the DEIS. This information is relevant to the proposed action's need. See also Alternatives comments below.

- **Inconsistencies in Tropical Shipping Vessel Information:** The FEIS should address the discrepancies identified in the DEIS as described below.
  - The DEIS refers to Tropical Shipping chartering a vessel with a 1,524 TEU capacity and 32.5 foot design draft to meet spikes in demand and states some of the largest container ships in Tropical's fleet *will likely increase in size to take advantage of economies of scale.*[3]
    - Tropical purchased in 2011 the *Tropic Express,* a ship designed to be a shallow draft vessel to transport both dry and refrigerated containers between Florida and the Bahamas.[4] This recent purchase appears to contradict the *likely increase in vessel size* prediction. According to Tropical Shipping, the *Express* has a 368 TEU capacity.[5]
    - Tropical Shipping's recent closure and consolidation of its Riviera Beach Warehouse in Palm Beach County into its Miami Warehouse appears to reflect Tropical Shipping's adaptability to economic conditions, like the recent global recession.
    - Tropical shipping appears to operate out of Port Miami.[6] Port Miami is scheduled to undergo sufficient deepening to accommodate those larger vessels, like the Dorian when Tropical Shipping determines a need to charter a larger vessel to address spikes in demand. The Port of Miami has rail access to facilitate a rail alternative. See Alternatives, **Full Array of Alternatives** comments below.
    - Table 2-1 indicates all *other* commodities, i.e., containerized goods, are shipped in vessels with an average design draft of 14.3 feet, which appears well within the No

Action Alternative conditions, an operating draft of -33 feet MLW.[7] The port deepening projects scheduled for ports Miami and Everglades will make them available via rail access to potentially handle the sporadic peak loads in shipping.

- It is unclear whether the proposed action is being proposed to handle peak shipping loads reflected in the expansion phase of the global economy's growth and recession cycle. It is unclear from the DEIS that the true purpose of the project is to facilitate light loading by large vessels because vessel manufacturers continue to make larger and larger vessels.

- **DWT:** Chapter 5 introduces a new volume measure, DWT (Dry Weight Tonnage). Table 5-1 discusses commodity volume in context of thousands of metric tons. Chapter 2 discusses some commodities in context of TEUs. The FEIS should explain the use of all these different volume measures and how to correlate them into the need for the proposed action. See comments regarding consistent use of terminology in the General Comments section below.
- **Compound Annual Growth Rate**: Table 5-1 provides no explanation how to interpret CAGR in the context of Chapter 5.
  - The FEIS should explain the compound annual growth rate (CAGR) column and how the percent values in the column are derived. The DEIS mentions CAGR in Figure ES-2, Chapter 2, p. 2-3, then for the first time provides CAGR values in Table 5-1, Chapter 5 without explaining the CAGR's value and why it is specifically being used.
  - The FEIS should explain why molasses but not sugar shipments are a benefitting commodity from the proposed action. Table 5-1 indicates more sugar volume (790,000 metric tons) is being shipped through the port than molasses (265,000 metric tons) during the 2017 - 2067 period. It is unclear in the DEIS why sugar is not considered to be a benefiting commodity.
    - Chapter 2, Table 2-1 does not include sugar in the list of commodities having draft constrained vessel characteristics by vessel type. Sugar's omission from this table indicates (as reflected in Table 5-1) that it is one commodity that will not benefit from the proposed action as sugar-carrying vessels do not need the proposed action in order to efficiently operate.
    - However, Chapter 2 includes sugar in Figure 2-1 to create a category called "other," which is represented as the commodity having the largest tonnage passing through the port.
    - Chapter 2 also includes sugar in Figure 2-2's annual cargo tons through the port for the 1996-2008 period and the associated text indicates that Figure 2-2 depicts the major bulk commodity tonnages for this period associated with the deepest draft vessels calling at the port. This could imply that the sugar commodity is transported in a draft constrained vessels. See comments regarding contradictions and inconsistencies in the General Comments section below.
    - Figure 2-2 indicates the greatest volume of sugar exports occurred in 2002 at 1,100,000 metric tons. In 2002, the number of vessels estimated to have called at the port ranges from 36.7 to 31.4 (using the 30,000 to 35,000 DWT which Chapter 5 states is the largest self-propelled vessels that can fully load under the no action conditions).
    - Table 5-1 indicates sugar's future with project commodity forecast is 790,000 metric tons. Under no action conditions, it is estimated 22.5 to 26.3 vessels would be required to transport this volume.
  - The FEIS should explain whether the commodity forecasts are such that a 50,000 DWT would be filled or would be operating at partial capacity. If commodity forecasts are such

that a 50,000 DWT vessel would not be filled to capacity, then would it still require a deeper channel. The DEIS fails to connect the commodity volume (e.g., Table 5-1), to the ship type needed to transfer its volume most efficiently. The FEIS should explain for a commodity like molasses, whose export volume is projected to be static at 265 thousands of metric tons for the period 2017 – 2067, and this projected volume is less than its year 2002 peak of over 300 thousand metric tons, what type of vessel is expected to call. The FEIS should explore the issue of vessel size: Will it be a large vessel leaving lightly loaded or will the same vessel which is calling now continue to call (particularly in light of Table 2-1 which indicates molasses vessels call at the port on average 8 times a year)?

Alternatives

- **Full Array Of Alternatives:** Consistent with the Corps' SMART guidance and NEPA's requirements to consider and evaluate a full array of alternatives, the FEIS should consider in lieu of deepening and widening, the alternative where commodities (sugar, molasses, petroleum and cement) shipped in the deeper draft vessels are shipped by rail to and from Ports Everglades and Miami.

  The Port Miami on-port rail has links to the national rail system and expects the railway service to move goods to 70 percent of the nation's population in four days or less.[8] Moreover, Port Everglades is the main south Florida seaport for receiving petroleum products[9] having the nation's second-largest non-refinery petroleum storage tank farm, serving 12 south Florida counties.[10] Port Everglades close proximity facilitates the Port of Palm Beach's use of its more powerful tug boats when needed. Consequently, the ship simulation study used the Port of Everglades' tug class for its third design vessel category (p. 3-5).

  The Port of Palm Beach's largest tenant, Tropical Shipping also appears to operate out of Port Miami[11] having access to rail service for any of its ships requiring a deeper draft. Moreover in 2010, Tropical Shipping closed its warehouse in Palm Beach County to consolidate its operations in Miami in response to the 2008 global recession.[12]

  Additionally, Port Canaveral's primary cargos include liquid petroleum and it is one of the three busiest cruise ports in the world.[13] Port Tampa is a major bulk port, handling cement[14] with petroleum and related products representing its largest-volume commodity sector: 16 million tons of oil, gas and jet fuel move through this port in a typical year.[15]
- **Widening Measures**: (see pp. 3-4 – 3- 6): The FEIS should explain the difference between management measure and alternatives. It is unclear whether the widening *Measures* discussion is the same as the NEPA required *Alternatives.* EPA supports integrating the Feasibility Study with the NEPA document in a clear manner, see Editorial comments below.
  - The FEIS should provide a figure to facilitate comparison between the nine widening measures (alternatives) discussed and the no-action alternative (existing conditions) to facilitate narrative understanding of the widening measures and alternatives comparisons.
  - The FEIS should provide a summary impacts table comparing each alternative in the final array, including the no-action, economic and environmental impacts to facilitate comparisons between alternatives consistent with CEQ'S NEPA regulations.

- The FEIS should provide a clear explanation of how each of the final array alternatives improves upon existing conditions and address the identified need.

- **Ship Simulation**
  - The DEIS indicates the bulk design vessel was one of three selected design vessel categories for ship simulation purposes. The bulk vessel represents the size of the molasses and petroleum tankers and cement bulk vessels which account for a large portion of total port tonnage, the most draft-constrained and the least maneuverable vessels requiring tug assistance.
    - The FEIS should address the inconsistency between the data and the DEIS' conclusion that the bulk design vessel represents a large portion of the forecasted total port tonnage.
      - Cement –
        - For 2067, the DEIS forecasts a cement-import volume of approximately 90,000 metric tons greater than the 1997 cement volume import peak of approximately 250,000 metric tons (Figures 2-2 and 2-3).
        - Cement imports currently account for only 4 percent of total port tonnage and 0.6 percent, of total port vessel calls (Figure 2-1).
        - The FEIS should discuss the likelihood of larger than existing vessels being used to transport a moderate increase in the forecasted cement import volume and the associated impacts. The FEIS should include the appropriateness for using the cement vessel as a basis for ship simulation. Additionally, the FEIS should also address whether the average annual number of vessel calls will be reduced from five (Table 2-1).
      - Molasses –
        - The DEIS forecasts an 165,000 metric-ton increase in molasses for 2017 to 265,000 metric tons, which is significantly less than the 2002 peak export volume of approximately 350,000 metric tons. Moreover, the 2067 forecasted molasses import volume projection is static at 265,000 metric tons (Figures 2-2 and 2-3).
        - Molasses exports currently only account for 6 percent of total port tonnage and 0.8 percent of total port vessel calls (Figure 2-1).
        - The FEIS should discuss the likelihood of larger than existing vessels being used to transport a decrease in forecasted molasses export volumes and the associated impacts. The FEIS should address the appropriateness for using a molasses tanker as a basis for ship simulation. Moreover, the FEIS should also address whether the average annual number of vessel calls will be reduced from eight (Table 2-1).
      - Petroleum –
        - The DEIS' 2067 forecasts a petroleum import volume of 348,000 metric tons and significantly less than the 2001 peak export volume of 1,350,000 metric tons. Moreover, a 165,000 metric-ton decrease in fuel oil/liquid petroleum imports is forecasted between 2008 and 2017 (Figures 2-2 and 2-3).
          - The DEIS also indicates fuel oil was a large percentage of port traffic but a large reduction in fuel oil receipts has occurred associated with the Riviera Beach Generating facility conversion to natural gas (p. 2-8).
        - Petroleum imports currently account for 28 percent of total port tonnage and 4.9 percent of total port vessel calls (Figure 2-1).

- The FEIS should discuss the likelihood of larger than existing vessels being used to transport the forecasted decrease in petroleum import volumes. The FEIS should include the appropriateness for using the petroleum tanker as a basis for ship simulation. Moreover, the FEIS should also address whether the average annual number of vessel calls will be reduced from 43 (Table 2-1).

- The DEIS indicates diesel fuel is received in substantial quantities without citing the volume or supporting economic information. (p. 2-8)
  - The FEIS should identify the markets using the diesel fuel being imported and the volume being consumed or imported to meet market demand.
- The DEIS appears to assume a future increase in diesel fuel imports similar to the projected general demand for energy in the transportation sector.
  - The FEIS should address the likelihood of petroleum being tanked to this port in the context of the much larger Ports Everglades, Canaveral, and Tampa that have, unlike Port of Palm Harbor, existing bulk petroleum storage and access to rail to serve the south and central Florida areas.
    - Port Everglades is the main south Florida seaport for receiving petroleum products[16] and has the nation's second-largest non-refinery petroleum storage tank farm, serving 12 south Florida counties.[17]
    - Port Canaveral's primary cargos include liquid petroleum and dry cement.[18]
    - Port Tampa has a petroleum terminal complex providing a link to meet the needs of Central Florida consumers plus the aviation fuel demands of Orlando International Airport. Petroleum and related products continue to represent the largest-volume commodity sector at the Port of Tampa, with some 16 million tons of oil, gas and jet fuel moving through the port in a typical year.[19]
  - Because of the relatively cheap, plentiful natural gas supplies associated with 'FRACK technology', the FEIS should address the likelihood of the transportation sector converting to natural gas similar to that occurring in the electrical power generation industry.[20]

> *For example the largest railway in the United States, BNSF is considering switching to natural gas and is developing a locomotive that runs on diesel and natural gas. General Electric and Caterpillar are developing locomotives to run on liquefied natural gas. In five years, natural-gas powered trains could begin to take over rails. BNSF estimates it is the second-largest consumer of diesel in the U.S. behind the U.S. Navy. If it switches to natural gas, this may represent a big blow to diesel.*[21]

- **Alternative Plan Evaluations** - The explanation of the USACE's use of four accounts (*National Economic Development*, *Environmental Quality*, *Regional Economic Development*, and *Other Social Effects*) to evaluate alternative plans is useful.
  - The FEIS should demonstrate how these four accounts were applied to the alternatives analysis (final array) to facilitate understanding of the tentative selected plan determination. It is unclear how the NED, EQ, RED, and OSE were affected by each alternative in the final alternative array analysis.
    - As part of the demonstration, the FEIS should explain the criteria used to determine each *account*.

- For example, which *account* considers the surge/sea-level impacts to the surrounding community or the potential air quality impacts to Environmental Justice communities and other sensitive populations including areas where children tend to congregate? For example,
  - EQ - this account appears to be limited to the seagrass and hardbottom impacts. EPA would also consider direct, indirect, and cumulative impacts to public health and safety associated with the proposed action to be a potential environmental impact (e.g., changes in flooding patterns, cumulative effects with sea level rise and storm surges, impacts to drinking water supplies associated with saltwater intrusion, etc.).
  - RED - this account appears solely focused on impacts to job creation and existing jobs but does not describe the type and value of the jobs created, how existing jobs are benefited, or provide information to support jobs created and benefited conclusions.
  - NED - the FEIS should explain the $4 million net benefit value by discussing how the national economy been benefitted by the proposed action's cost. For example,
    - Does the NED account the dollar value of each commodity imported in context of the proposed action's cost? The project benefits should identify underlying assumptions including any bias to low value or high value goods.
    - Does the NED account for speed and reliability of delivery or just delivery cost? The West Coast, which has built up its container yards and highway and rail infrastructure, may deliver goods faster to the East Coast than goods traveling by ship through the Panama Canal.[22, 23]
    - Does the NED account for the new vessels too big to pass through the new Panama Canal locks? For example, Los Angeles is already processing some of the biggest vessels on water and that are now too big to pass through the newly expanded Panama Canal locks.[24]
    - The FEIS should explain how or what part of the national economy stands to benefit from the proposed action. The DEIS indicates the tentatively selected plan demonstrates the second highest net benefits and the highest benefit cost ratio. There is no context provided to explain this in perspective of the change in the national economic value of the national output of goods and services.
- The FEIS should explain what the DEIS means when it states that the NED, EQ, RED, or OSE objectives have been fully or partially met, or did not meet the federal objective (Table 3-5).
- The FEIS should explain how the NED calculation differs from the RED calculation – what is the actual difference in national economic and regional economic benefits? Is the NED based solely on transportation costs? Is the RED solely based on job creation and improvements to existing jobs?
- The FEIS should clarify the RED's definition of registering changes in distribution of regional economic activity. Does the RED look at the effects of the proposed action in context of other neighboring port deepening and improvement projects or competition between ports?
- The DEIS (p. 3-16) indicates 15.3 jobs for every $1 million of expenditure will be created and 1,430 jobs will be positively impacted from construction expenditures.

- The FEIS should clarify how many actual jobs will be created as it is difficult to determine from the information provided in the DEIS.
  - The FEIS should explain how to interpret Table 4-4.
    - Table 4-4 indicates the total costs including interest is $96 million.
    - Table 4-4 also provides a total average annual cost. Is the total average annual cost in addition to the $96 million?
    - How is the *jobs created* number calculated? Is it 15.3 times $96 million or 1,469 jobs? Or must the reader multiply the average annual costs by the 50-year project life, which is $215 million then add to the $96 million total costs with interest, for a total of $311 million, or 4,748 jobs?
- The FEIS should contrast the new job creation in context of the Port's current employment (including indirect) of approximately 2,400 people[25] so the full value of the expenditures can be appreciated (i.e., Benefits).
- The FEIS should clarify the significance of the new jobs created in context of both the NED and RED. For example how significant is the creation of 15.3 jobs for every $ million of costs nationally and regionally? The DEIS does not discuss if these new jobs are permanent or temporary, low wage or high wage, skilled or unskilled, etc.
- The FEIS should explain how the existing 1,430 jobs will be positively impacted to fully demonstrate the value of the proposed action. See also Editorial, **Support DEIS Conclusions** comments below.
- The FEIS should explain how jobs will be increased and existing jobs positively impacted when the focus is to reduce the number of vessel calls (i.e., increase transportation efficiencies), when the commodity forecast analysis do not appear to indicate growth. Consequently, the assumption that a drop in the number of vessels calling but shipping the same or less commodities may detrimentally impact jobs servicing these vessels such that existing jobs are in actuality may be lost or that employment gains projected for the future may not be realized.

- **Petroleum:** The FEIS should clarify whether the demand for petroleum is driving larger vessels to call or whether the proposed action's implementation will allow larger vessels to arrive albeit light-loaded because of decreased demonstrated petroleum demand (Section 5.2.3).
  - The DEIS indicates the proposed action's implementation will likely result in larger petroleum vessels to call at the Port[26] but is unclear whether it is the demand for petroleum driving larger vessels to call, which is driving the demand for a deeper port.
  - In earlier sections the DEIS indicated that the 2067 forecasted import of petroleum is significantly less than the 2001 peak of 1,350 metric tons (Figure 2-2).
  - Table 2-1 indicates petroleum tankers and asphalt barges average 38 and 5 calls a year, respectively. This number of calls appears inconsistent with the 348 metric ton forecast for 2067, particularly when contrasted by the number of calls made by molasses tankers and cement vessels (5 and 8, respectively) which transport a tonnage similar to 348 metric tons projected for petroleum. The FEIS should discuss Section 5.2.3 in context of Table 2-1 information.
  - The FEIS should clarify whether the general increase of vessel size associated with the proposed action's implementation will realize lightly loaded vessels calling 38 (petroleum) and 5 (asphalt) times a year or will it realize fewer vessels calling but importing petroleum and asphalt fully loaded.

    - The FEIS should explain the impact to the Ports' supporting infrastructure and jobs associated with a decreased number of vessels importing petroleum and asphalt, including how these potential port changes are accounted for in the National and Regional Economic Development (NED & RED) analyses.
    - Additionally, the FEIS should also describe the Port's ability to provide sufficient bulk petroleum storage facilities to compete with sister ports that have these facilities and supporting infrastructure in place (e.g., Ports Everglades, Canaveral, and Tampa).
- **Molasses:** The FEIS should clarify whether the demand for molasses is driving larger vessels to call or whether the proposed action's implementation will allow larger vessels to arrive albeit light-loaded because of decreased molasses demand (Section 5.2.3).
    - The DEIS indicates the proposed action's implementation will likely result in larger vessels shipping molasses to call at the Port[27] but is unclear whether it is the demand for petroleum driving larger vessels to call, which is driving the demand for a deeper port.
    - In earlier sections the DEIS indicated the 2067 forecasted molasses demand is not expected to increase above the 2002 peak (Figure 2-2) and molasses tankers average 8 calls a year (Table 2-1).
    - The FEIS should clarify whether the general increase of vessel size associated with the implementation of the proposed action will realize lightly-loaded vessels calling 8 times a year or will realize fewer vessels calling but exporting molasses fully loaded.
        - The FEIS should explain the impact to the Ports' supporting infrastructure and jobs, if fewer vessels call at the Port to export molasses. The FEIS should discuss how these port impacts are accounted for in the National and Regional Economic Development (NED & RED) analyses.
- **Cement:** The FEIS should clarify whether the demand for cement is driving larger vessels to call or whether the proposed action's implementation will allow larger vessels to arrive albeit light-loaded because of the small forecasted increase in cement demand.
    - The DEIS indicates cement carriers will likely be larger vessels drawing deeper drafts. The FEIS should clarify whether if these vessels will be arriving light-loaded, and if they will still draw deeper drafts.
    - In earlier sections the DEIS seems to indicate the demand for cement is forecasted to increase by 90 metric tons in 2067 above the 1997 peak of approximately 250 metric tons (Figure 2-2). Table 2-1 indicates cement tankers average 5 calls a year.
    - The FEIS should clarify whether the general increase of vessel size associated with the implementation of the proposed action will realize lightly-loaded vessels calling 5 times a year or will realize fewer vessels calling but exporting cement fully loaded.
    - The FEIS should explain the impact to the Ports' supporting infrastructure and jobs if fewer vessels call exporting molasses and importing petroleum and cement. The FEIS should discuss how these port impacts are accounted for in the National and Regional Economic Development (NED & RED) analyses.

General comments

- **Proposed Action Description:** The FEIS should include a paragraph describing the proposed action. See Editorial comment below regarding improving the reader road map.
    - The deepening aspect is the most clearly defined.

- The widening component is unclear. Figure ES-4 and Table 1-1seem to indicate it is the Main Turning Basin being widened. However, Chapter 3 indicates the channel is being widened. Figure ES-3 depicts a figure insert showing 3 widening alternatives.
- The stand-alone improved maintenance feature to reduce operation and maintenance dredging and jetty stabilization needs are not described until Chapter 3 but is proposed as part of the project need.

- **Consistent use of Terminology:** EPA recommends that the FEIS should be consistent in its use of terminology because the DEIS' inconsistent terminology generally confuses the reader unfamiliar with the Corps' process.
  - Figure 2-1 refers to *petroleum products*, Figure 2-2 refers to *fuel oil*, Figure 2-3 refers to *liquid petroleum products*, Table 2-1 refers to liquid *petroleum* then adds a new petroleum product, asphalt. Figure 2-6 refers to *tanker petroleum*. The reader is uncertain whether all these terms are referring to the same product or just reflect data available for a subset of product, but different products. The FEIS should address these inconsistencies.
  - Figure 2.1 defines *other* to include four commodities. Figure 2-2's *other* category appears to be differently defined than Figure 2.1's. Figure 2.3 has no *other* category.
  - In Section 3.9, the DEIS introduces four federal accounts in context of the federal objective (p. 3-14). In Section 3.9, the DEIS interchanges the word *accounts* and *objectives*, e.g., the Section 3.9 *NED account* appears to be referred to as the Section 3.9 *NED objective* which appears not to be the Section 3.9 *federal objective* nor the Section 3.4.2 objectives.
- **Current Data:** The FEIS should use more current economic data, 2009 – 2012, instead of relying on 2007 and 2008 data to support the proposed action's need.
- **Use Parameters Allowing Direct Comparisons:** The FEIS should translate tonnage and TEUs used to describe the port's use in context of vessel characteristics (e.g., draft, length and width) to facilitate understanding of the proposed need for the project. Figure ES-3 emphasis the importance of considering vessel design dimensions when developing alternatives yet the economic need described in Chapter 2 discusses it in context of tonnage and TEUs.
  - For example the DEIS indicates during the period1996 – 2004, total major bulk cargo grew from 1.71 million metric tons to 2.42 million metric tons for a combined annual growth rate of 4.42 percent. The FEIS should relate this volume increase in context of TEUs and vessel type categories since the proposed action is focused on channel deepening and widening.
  - The FEIS should define TEUs to facilitate understanding of the project need.
  - Figure 2-5: Vessel **Movements** by draft – the FEIS needs to explain its relevance and context to the narrative and Figure 2-4: Annual Vessel **Trips** and Figure 2-6: Benefitting Vessel **Call** Forecasts (i.e., Is a "movement" a "trip" or a "call?" Is a "trip" a "call?").
- **Support DEIS Conclusions:** The FEIS should include sufficient narrative to support DEIS conclusions where it references documents or studies which were not included in the DEIS. (i.e., the FEIS should briefly describe the result of a study while providing a study cite to allow anyone to seek out the study).
  - For example, the FEIS should provide data to support the DEIS' statement, *"movements that are 27 feet of draft and above have remained steady from 2006 through 2010"* (p. 2-5). The DEIS information appears to be inconsistent with this statement.

- Figure 2-4 provides total annual vessel trips for the 1996 – 2010 period but does not differentiate these trips by vessel characteristics, i.e., sailing at drafts 27 feet or greater.
- The DEIS states any calls with sailing drafts at 33 feet or more are draft and tide constrained (p. 2-5).
- Figure 2-1 provides data on the number of vessel calls by commodity type. Of the commodity types listed in Figure 2-1, Table 2-1 indicates only the molasses tanker drafting at 34.5 feet currently sails at drafts 33 feet or more and subject to draft and tide constraints.
- Figures 2-2 and 2-3 indicate molasses shipments have decreased significantly from their peak in 2002.

  - Figure 2-1 indicates the commodities of containerized goods and general cargo constitute 40 percent of the port tonnage and 90 percent of the vessels calling at the port. Moreover, Figures 2-2 and 2-3 indicate these commodities are the only commodities demonstrating growth and Table 2-1 indicates these commodities are shipped in an average design draft vessel of 14.3 feet. Moreover, the Port's largest client, Tropical Shipping's (containerized commodity shipper) newest vessel purchased in 2011, the Tropic Express, was designed to be a shallow draft vessel carrying 368 TEU.
  - The DEIS indicates impacts to vegetative communities as a result of continued Operations and Maintenance (O&M) activities were discussed in previous NEPA documents for Palm Beach Harbor (Chapter 1, Related Documents), would remain valid, and are incorporated by reference into the DEIS. The FEIS should fully describe what these impacts are.
  - Benthos Impacts: The DEIS indicates continuing to perform O&M dredging at the currently authorized depths, including the existing settling basins, would result in impacts to benthos as discussed in previous NEPA documents for Palm Beach Harbor (Chapter 1, Related Documents) (P. 2-36). The FEIS should fully describe what these impacts are.
  - Nearshore Placement: The DEIS indicates placement of material in the nearshore has been evaluated in previous NEPA documents and the effects are incorporated by reference (Section 5.4.3). The FEIS should summarize what the effects are.

- **Inconsistencies:** The FEIS should address inconsistencies in the DEIS. Correcting and addressing these issues will also potentially help meet the USACE's goal for transparency.
  - Widening Component: The DEIS induces confusion regarding the proposed action's widening component. The DEIS discusses the nine *initial* widening alternatives, a widening without deepening alternative, and ten deepening with widening alternatives.
    - In one section, the DEIS implies each depth alternative may have a different width because the relative width increases three foot per foot of depth increase. The DEIS indicates the width change over 10 feet depth increase is very small compared to the needed width but does not provide the width dimension to facilitate understanding of the alleged smallness of the width changes per foot of depth.
    - In another section, Section 3.10 the DEIS includes a statement that the widening is the **same** for *each alternative*, which is inconsistent with the statement: *the ultimate top width is dependent upon the final depth* (p.3-14). Furthermore, Section 3.10's language *each alternative* does not exclude the no action alternative. Because of the proposed action, the 'no action' alternative would be expected to have a different width than the alternatives evaluated.
  - Inconsistent BCRs and Costs: The FEIS should address the inconsistencies in the DEIS tables 3-3 (Section 3.8, p. 3-13) and 4-4 (Section 4.9.2, p. 4-23). Table 3-3 depicts the

TSP with an average annual cost of $3,311,091 and a BCR of 2.21 while Table 4-4 depicts (with no explanation) an average annual cost of $4,280,000 and a BCR of 1.71. The FEIS should fully explain how and why the annual costs go up and the BCR goes down between the two tables and any assumptions being made in the economic forecasts.

- **Provide a brief explanation of the models selected and why selected.** For example, the DEIS indicates the Habitat Equivalency Analysis and UMAM were used but does not explain why or the appropriateness for using them over other models, what the 'modelx' cannot do, the underlying assumptions of these models, and the degree of uncertainty in the models' results. EPA generally agrees that the details of how it is used and the data collected for the model is appropriate for placement in the appendix.
- **Hard bottom habitat**. Section 5.5.4 states: "*The areas to be impacted and their functional value are discussed in earlier sections of this EIS and the Habitat Equivalency Analysis found in the Mitigation Plan Attachment*". The DEIS is targeted for resource agencies and the public. The FEIS should specify where the earlier sections are located.
- **Ecosystem function:** The definition of function and functional values in context of ecosystem and seagrass is poorly defined to be meaningless as is the definition of Ecosystem in the glossary.
- **Table of Contents:** The DEIS Table of Contents is difficult to read. EPA recommends that the FEIS Table of Contents be presented in a more simplified and more organized manner.
- **Foldouts Use:** The document should provide a guide as to how to use the foldouts and alert the reader where they are and when they will be useful.
  - Chapter 5 attempts to do this but not very clearly.
  - The last page of the document has a fold out depicting 3 scenarios: existing conditions (Chapter 2), existing conditions plus widening scenarios (Chapter 3) , and the TSP (Chapter 4), but it does not appear to be referenced in any of the Chapters – 2, 3, or 4
  - See also Editorial Comments, FS/NEPA Integration comments below regarding road map.

Air Quality

- Section 2.5.10 of the DEIS describes existing conditions regarding air quality in the general project study area and region.
- The DEIS states that the air quality within the project area is generally good due to low emission activity and the presence of offshore breezes.
- The DEIS does not include any identified sources of emissions or emissions data from the Port.
- Table 2-8 includes Annual Mean Air Quality data for Palm Beach County for 3 years (2009, 2010 and 2011) for several primary air pollutants. Because this table lacks units, it provides no value for the purposes of establishing the existing or background air quality conditions.
- Section 5.5.9 of the DEIS includes a general discussion of future with-project conditions (TSP) for air quality. This section lacks supporting data, estimated emission projections based upon increased port activities such as construction and increased loading and unloading of goods, larger ships utilizing the Port, and increased local traffic associated with the projected growth in jobs created.

- The FEIS should include an 'estimated' emissions inventory for the Port, including stationary and mobile pollutant sources from diesel and gasoline powered engines. The baseline inventory should include cargo carrying vessels, harbor craft, landside cargo handling equipment, trucks, and other current emission sources of criteria pollutants, diesel emissions (e.g., Ozone, Carbon monoxide, PM2.5) and air toxics (e.g., Benzene, Acrolein, etc.).
- The FEIS should provide a realistic projection of the future emissions (to the design year 2067) from stationary and mobile sources using approved air models. EPA can provide general technical assistance through Mr. Alan Powell, 404-562-9045 or powell.alan@epa.gov for the USACE in order to develop a relevant air quality assessment for the Port.
- The FEIS might also include a general air quality analysis for air toxics for neighborhoods and communities near the Port or along major transportation routes to and from the Port.
- The FEIS should identify any future plans to convert diesel powered equipment to electric equipment, any future plans to convert to low-sulfur diesel fuels, and any future plans to monitoring air quality in and around the Port and nearby neighborhoods and communities.

Storm Surge Impacts

- Existing Conditions – the FEIS should describe storm surge impact based upon existing conditions (i.e., low and high tides, including previous histories of major storm surge impacts; Section 2.3.4).
  - For example while the DEIS indicates generally, *"2.5 ft of tide or greater is available about 32% of the time, and 3 ft of tide or greater is available about 15% of the time"*, it does not discuss this tide information in the context of storm surge impacts to the proposed action and the neighboring area and infrastructure.
  - Palm Beach County's coastal areas are susceptible to storm-surge flooding. This includes the sudden and massive build-up of water levels by the force of onshore winds produced by tropical storms, hurricanes, and northeasterners. Water levels of 12 feet or more can overflow normally dry lands with devastating results. The northern and southern coastal areas of the county are somewhat more susceptible to surge flooding than are the central sections.[28]
  - Flooding, erosion, and salt-water intrusion through the porous limestone outcrops into already intruded drinking water supplies is potentially a significant concern associated with this project that has not been adequately addressed in the DEIS.
    - Potential erosion impacts, associated with the proposed widening in context of storm-related surges, upon surrounding properties and public infrastructure should be identified and discussed in the FEIS.
- **Proposed Action Conditions** (Section 5.3.4): The FEIS should discuss how the proposed channel deepening and widening to facilitate deeper draft and wider vessels, which also facilitates the transfer of larger volumes of water inland, particularly during large, slow moving storm events.
  - The FEIS should explain what a 0.328 difference means in context of the surrounding area (infrastructure, homes, businesses, etc.) in context of Florida being at or below sea level.

- Britton Hill, in the Florida Panhandle, is the highest point in Florida, at 345 feet above sea level. The lowest point in Florida is sea level at the Atlantic Ocean.[29]
- The FEIS should address how the proposed impacts affect existing areas already susceptible to storm-surge flooding during the proposed project's design year of 2067.
- The FEIS should evaluate the proposed action (TSP) compared to the 'no action' alternative during low level storms in relation to storm-surge impacts.
- The FEIS might also include appropriate mitigation where reasonable and prudent (e.g., requiring the applicant to contact the local county's emergency management program to allow them to update their storm-surge flood maps and evacuation procedures, increasing stormwater retention basin areas at the Port, etc.).

- The FEIS should discuss how the storm-surge impact analysis was performed, the assumptions made, and confidence in any model derived results.
  - Did the DEIS analysis include worst case scenarios? (e.g., slow moving, category 5 hurricane occurring at a high tide with the three sea-level rise scenarios discussed in Section 2.33: baseline, intermediate, and high over the 50-year project life).
  - Did the DEIS analysis use the ADCIRC storm surge simulations? (e.g., the USACE study: *Surge Sensitivity Analysis for Sabine Neches Water Way Navigation Project* by Ty V. Wamsley, Mary A. Cialone, and Tate O. McAlpin, March 2010).[30]
  - The DEIS did not identify where and what the changes in peak surge would occur (e.g., in the area associated with the proposed action: infrastructure, commercials areas and residences, the barrier island, etc.)
- The FEIS should describe the cumulative effect of storm-surge and sea level impacts based upon the three sea-level rise scenarios discussed in Section 2.33, baseline, intermediate, and high over the 50-year project life (p. 2-17).
  - The DEIS does not include storm surge and sea level rise as cumulative effects associated with the proposed widening and deepening of the harbor in the Cumulative Impacts Section (5.5.4). The cumulative impact of a major storm, (e.g., a slow moving category 5 hurricane, at a high tide, with an increased sea-level rise: the high scenario) in the context of land subsidence upon the surrounding infrastructure, homes, businesses and other facilities, is a potential environmental concern.

Dredged Material Disposal

EPA notes a modeling study will be conducted prior to pre-construction engineering and design and will expand the site as necessary. Based on modeling done at Ports Everglades and Miami, EPA anticipates the need to expand is unlikely for the 1.4 million cubic yards of material projected for the Offshore Dredged Material Disposal Site (ODMDS).

- **ODMDS status:** The FEIS should update status of the existing ODMDS. The ODMDS was used this year as part of O&M activities (Section 2.4.3).
- **Nearshore placement of dredged material:**
  - The FEIS should clarify what types of material (e.g., rock, clay, silt, contaminated sediments) can be placed nearshore and the seaward extent of the nearshore placement site.
    - The DEIS states non beach-quality material can be placed nearshore in depths greater than the mean high water line. This implies mud could be placed in 60 feet of water two miles offshore on top of coral reefs so long as the surface is not breached. (Section 2.4.3)

- In Table 3-1, the DEIS states two different placement sites will be used: sand will be placed in the nearshore while consolidated material will be placed in the ODMDS. (p. 3-9)

- The FEIS should clarify how far offshore, *nearshore* placement can or will occur. The DEIS indicates approximately 113,000 yards^3 would be used for sea grass mitigation and another 450,000 yards^3 of sand would be placed in the *nearshore* south of the inlet. (Section 4)
- The FEIS should address the regulatory requirements for all open-water placement of dredged material (e.g. nearshore, filling of anoxic holes, in water habitat creation) not placed in a regulatory designated site, i.e., ODMDS. Open-water placement of dredged material a is regulated activity under Section 404 of the Clean Water Act subject to a 404(b)(1) Evaluation.
- The FEIS should address the suitability of the dredged material to be used for seagrass mitigation from a toxicity perspective.
- The FEIS should address whether the use of the existing ODMDS will increase with the implementation of the TSP. The ODMDS has been used very little for operation and maintenance dredging of the existing Palm Beach Harbor project. (Section 5.4.3)

Water Quality Comments

- **Seagrass Mitigation:** The FEIS should discuss whether the dredged material used in the seagrass mitigation will impact water quality and be consistent with the Clean Water Act's requirements.
- **Salt Water Intrusion:** The FEIS should, because southern Florida from Palm Beach to Miami is among the areas especially vulnerable to saltwater intrusion into municipal freshwater supplies associated with sea-level rise,[31] address cumulative effects associated with the proposed action.
  - Rising sea level is expected to increase the hydraulic backpressure on coastal aquifers, reduce groundwater flow toward the ocean, and cause the saltwater front to move inland, thus, threatening to contaminate coastal-area water-supply wells.
    - Porous limestone geology allows for movement of salt water underground and inland.
      - The DEIS indicates the entrance harbor is an artificial cut through the barrier beach and limestone formation connecting the costal lagoon, Lake Worth with the Atlantic Ocean (Section 2.1).
      - The proposed action includes a widening component. Limestone rock outcrops are found on either side of the Federal channel at the interface between the inlet and the Intracoastal Water Way (Section 2.1).
      - Hardbottom habitat occurs along the limestone walls of the entrance channel (Section 2.5.5).
      - Figure 4-1 Material Classification (p. 4-3) indicates in Area C (Main channel) and D (turning basin) outcrops of limestone and inter-fingering limestone beds with sandstone.

Mitigation

- The DEIS lacks specific details about the potential mitigation sites (i.e., Borrow holes).

- The DEIS identifies the potential need to mitigate between 8.25 and 11.25 acres of seagrass impacts and between 4.9 and 9.8 acres for hardbottom impacts.
- The FEIS should identify with greater certainty the extent of the 404 impacts shown above.
- EPA requests that a specific mitigation plan be included in the FEIS that addresses long-term protection of mitigation sites, the BMPs to be employed during creation/restoration, specific success criteria, identification of the mitigation reference site, proposed mitigation ratios, and any proposed enhancements to species diversity (not solely seagrass counts/coverage).

Editorial Comments

- **FS/NEPA Integration:** EPA supports the USACE's efforts to integrate the Feasibility Study with the NEPA-required environmental study. However, the combination of the two documents should be executed in a clear, organized fashion such that the combined document facilitates a clear understanding of the problem and makes a clear comparison of the impacts between the reasonable and feasible alternatives.
- The FEIS should explain the Feasibility Study terms in context of the NEPA terminology. This could be accomplished with a brief introductory paragraph explaining the overlap between the Feasibility and NEPA requirements with an explanation of how the Feasibility Study and NEPA requirements are being met.
- EPA recommends that the USACE improve the overall organization and clarity in the FEIS. The DEIS references studies or items in appendices but does not provide a summary of how these studies support the conclusion. The DEIS also makes conclusions but does not always provide supporting information explaining the conclusions made. The FEIS should address these issues (e.g., No executive summary, Chapter 1 lacks adequate introductory information, etc.) from the DEIS, including the format (Please see: 40 CFR § 1502.2 and § 1502.10).

- **ES figures:** EPA finds the foldout figures labeled 'ES' utilize professional graphics and are generally helpful to give the reader a final summary of the project (after having reviewed the DEIS). However, EPA recommends that these figures should not be used as a total substitute for a clear and concise written executive summary.
- **Figure 2-3:** *Future Commodity Movement Forecasts* date range is mislabeled as 2009 – 2067 when the x axis actually starts at 2017 instead of 2009. (p. 2-5)
- **Figure 3-4:** *Jetty Concept* – lacks both the identifiers for the vertical and horizontal parameters to facilitate understanding of the diagram. (p. 3-11)
- **Summary of Initial Array of Alternatives**: Figures 3-1 and 3-2 are difficult to read to understand the differences between widening plans 1 and 2. (p. 3-7)

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[1] http://www.palmbeachpost.com/news/news/ports-top-tenant-tropical-shipping-downsizes-as-ca/nLpZY/
[2] http://www.portofpalmbeach.com/about-us/
[3] See page 2-14, Future Without-Project Conditions (No Action Alternative): Commodity and Fleet.
[4] http://pyramid.delislewalwyn.com/index.php?option=com_content&view=article&id=96:tropical-shipping-launches-its-newest-vessel-mv-tropic-express&catid=54:edition-5
[5] https://www.tropical.com/NR/rdonlyres/456472F6-EF7A-4DC8-9964-ECBAD1A214E1/0/Face_sheet_Vesse_Specifications.pdf

[6] https://www.tropical.com/External/En/Contact/USA/Miami+Florida+Locations.htm
[7] Florida Seaports: charting our future: Port Florida Seaports: charting our future: Port Palm Beach Harbor at http://www.flaports.org/Sub_Content3.aspx?id=22&pid=3
[8] Florida Seaports: charting our future: Port Miami at http://www.flaports.org/Sub_Content3.aspx?id=21&pid=3
[9] Florida Seaports: charting our future: Port Everglades at http://www.flaports.org/Sub_Content3.aspx?id=15&pid=3
[10] http://www.daybreakexpress.com/fl-ports/florida-portfreight.htm
[11] https://www.tropical.com/external/en/Contact/USA
[12] http://www.bizjournals.com/southflorida/stories/2010/02/08/daily38.htm
[13] www.portcanaveral.org
[14] www.tampaport.com
[15] http://www.tampaport.com/cargo/bulk-cargo.aspx
[16] Florida Seaports: charting our future: Port Everglades at http://www.flaports.org/Sub_Content3.aspx?id=15&pid=3
[17] http://www.daybreakexpress.com/fl-ports/florida-portfreight.htm
[18] www.portcanaveral.org
[19] http://www.tampaport.com/
[20] See: http://www.c2es.org/publications/natural-gas-use-transportation-sector
[21] http://www.smartplanet.com/blog/bulletin/railway-giant-considers-switch-to-natural-gas/14262
[22] http://www.nytimes.com/2012/08/21/us/us-ports-seek-to-lure-big-ships-after-panama-canal-expands.html?pagewanted=all&_r=0
[23] According to a USDA study, transit time from the West to the East Coast by rail is six days and the total time from Asia to the East coast is approximately 18.3 days. See: *Impact of Panama Canal Expansion on the U.S. Intermodal System* (January 2010) available at http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5082003
[24] http://www.nytimes.com/2012/08/21/us/us-ports-seek-to-lure-big-ships-after-panama-canal-expands.html?pagewanted=all&_r=0
[25] www.portofpalmbeach.com
[26] DEIS Section 5.2.3 – liquid petroleum, p. 5-4.
[27] DEIS Section 5.2.3 – sugar and molasses, p. 5-4.
[28] http://www.pbcgov.com/dem/floodawareness/floodinformation/primarycause.htm
[29] http://www.netstate.com/states/geography/mapcom/fl_mapscom.htm
[30] Available at http://ww3.swg.usace.army.mil/pe-p/SNWW/Doc/2Sabine%20Surge%20Final%20Draft%203-22-10.pdf
[31] *Climate Change and Sea-Level Rise In Florida: An Update Of The Effects Of Climate Change On Florida's Ocean And Coastal Resources* (December, 2010) http://www.floridaoceanscouncil.org/meetings/files/2010/11-08/SLR_1108.pdf

U.S. ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL IMPACT STATEMENT (EIS) RATING SYSTEM CRITERIA

EPA has developed a set of criteria for rating Draft EISs. The rating system provides a basis upon which EPA makes recommendations to the lead agency for improving the draft.

RATING THE ENVIRONMENTAL IMPACT OF THE ACTION

$ LO (Lack of Objections): The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposed action.

$ EC (Environmental Concerns): The review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact.

$ EO (Environmental Objections): The review has identified significant environmental impacts that should be avoided in order to adequately protect the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). The basis for environmental objections can include situations:

1. Where an action might violate or be inconsistent with achievement or maintenance of a national environmental standard;
2. Where the Federal agency violates its own substantive environmental requirements that relate to EPA's areas of jurisdiction or expertise;
3. Where there is a violation of an EPA policy declaration;
4. Where there are no applicable standards or where applicable standards will not be violated but there is potential for significant environmental degradation that could be corrected by project modification or other feasible alternatives; or
5. Where proceeding with the proposed action would set a precedent for future actions that collectively could result in significant environmental impacts.

$ EU (Environmentally Unsatisfactory): The review has identified adverse environmental impacts that are of sufficient magnitude that EPA believes the proposed action must not proceed as proposed. The basis for an environmentally unsatisfactory determination consists of identification of environmentally objectionable impacts as defined above and one or more of the following conditions:

1. The potential violation of or inconsistency with a national environmental standard is substantive and/or will occur on a long-term basis;
2. There are no applicable standards but the severity, duration, or geographical scope of the impacts associated with the proposed action warrant special attention; or
3. The potential environmental impacts resulting from the proposed action are of national importance because of the threat to national environmental resources or to environmental policies.

RATING THE ADEQUACY OF THE ENVIRONMENTAL IMPACT STATEMENT (EIS)

$ 1 (Adequate): The Draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

$ 2 (Insufficient Information): The Draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the Draft EIS, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the Final EIS.

$ 3 (Inadequate): The Draft EIS does not adequately assess the potentially significant environmental impacts of the proposal, or the reviewer has identified new, reasonably available, alternatives, that are outside of the spectrum of alternatives analyzed in the Draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. The identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. This rating indicates EPA's belief that the Draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised Draft EIS.

United States Department of the Interior

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ER 13/0246
9043.1

June 3, 2013

Ms. Angela Dunn
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Re: Comments on the Draft Environmental Impact Statement (DEIS) for Expansion of Lake Worth Inlet, Palm Beach Harbor Project, FL

Dear Ms. Dunn:

The United States Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for Expansion of Lake Worth Inlet. We have no comments at this time.

If you have questions, I can be reached on (404) 331-4524 or via email at joyce_stanley@ios.doi.gov.

Sincerely,

Joyce Stanley, MPA
Regional Environmental Protection Specialist

cc: Jerry Ziewitz – FWS
Gary Lecain - USGS
Anita Barnett – NPS
Chester McGhee – BIA
OEPC – WASH

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning Division
Environmental Branch

Mr. Miles Croom
Assistant Regional Administrator
Habitat Conservation Division
National Marine Fisheries Service
263 13th Avenue South
St. Petersburg, Florida 33701-5505

Dear Mr. Croom:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) has received your letter dated May 28, 2013, providing Essential Fish Habitat (EFH) Conservation Recommendations for improvements to Lake Worth Inlet, Palm Beach County, Florida. As outlined in the Draft Environmental Impact Statement (DEIS) provided to your office on April 19, 2012, the tentatively selected plan (TSP) includes deepening the entrance channel from 35 to 41 feet and widening from 300 to 450 feet; deepening the main turning basin from 29 to 33 feet and extending the southern boundary of the turning basin an additional 150 feet.

A detailed response to the six EFH Conservation Recommendations is enclosed. Based on the enclosed responses, the Corps is satisfied that the consultation procedures outlined in 50 CFR Section 600.920 of the regulation to implement the EFH provisions of the Magnuson-Stevens Act have been met.

This completes the Jacksonville District's requirements for EFH consultation under the Magnuson-Stevens Act. In accordance with the previously cited regulations and finding, no further action is required by the Corps unless NMFS-HCD plans to elevate to the Department of Army Headquarters in accordance with 50 CFR 600.920(j)(2).
If you have any questions, please contact Pat Griffin at 904-232-2286.

Sincerely,

Eric P. Summa
Chief, Environmental Branch

Enclosure

1. The District shall update the DEIS or EFH assessment to describe no less than 5.5 acres of seagrass habitat impacts.

Response: The Corps determined 4.5 acres of seagrass impacts based on the latest available seagrass survey of 2011. It appears that NMFS may have combined the coverage of both the 2011 and 2008 surveys to obtain a cumulative coverage of 5.5 acres of seagrass. The Corps does not calculate impact acreage utilizing all observed historical coverage (cumulative coverage), but rather calculates acreage at the time of impact. The Corps will conduct seagrass surveys prior to construction to ensure an accurate impact acreage is determined. The surveys will be made part of the project contract specifications which will be provided to NMFS-HCD with an invitation to the required pre-construction meeting.

2. The District shall update the DEIS or EFH assessment to describe no less than 7.3 acres of hard bottom impact.

Response: NMFS calculation of 7.3 acres comes from the surveys provided by the Corps which included GIS layers outlining hard bottom extent. In the reports provided in the DEIS, the areas are described in detail containing various amounts of hard bottom mixed with sand. Page 3-13 of the 2008 survey shows a graph depicting the % of sand coverage for each area, and page 13 of the 2011 report includes a table identifying % hard bottom. The areas indicated in Figure 3 provided by NMFS encompasses the extent hard bottom was seen, not areas entirely composed of hard bottom. The Corps calculation acreage does not include sand, only identified hard bottom, which comprise from 43 to 80% hard bottom (2008 and 2011 surveys). The GIS layers separate hard bottom habitat from sand/hard bottom habitat, and when referenced with the % sand in the report, resulted in what the Corps estimated as hard bottom impact. The Corps has attached the calculation spreadsheet used to determine the hard bottom impacts. Hard bottom coverage will be examined as part of the pre-construction surveys, which will dictate impacted acreage of hard bottom that requires mitigation.

3. The District shall provide an assessment that quantifies direct and indirect impacts to unvegetated estuarine bottom and the Lake Worth Inlet as a coastal inlet and EFH.

Response: The acreage of unvegetated bottom will be included in the final EIS. The Corps does not believe there will be any significant impacts to unvegetated bottom aside from temporal disturbance during construction.

4. The District shall require use of best management practices to avoid and minimize the degradation of water quality and minimize impacts to hardbottoms and seagrass habitat, including the use of staked turbidity curtains around the work areas, marking of seagrass and hardbottom habitat to facilitate avoidance during construction, and prohibiting staging, anchoring, mooring, and spudding of work barges and other associated vessels over seagrass and hardbottom. These BMPs shall be coordinated with NMFS for approval prior to commencement of any work.

Response: The Corps accepts this conservation recommendation.

5. The District shall update the cumulative impact assessment to describe the impact on the Lake Worth Lagoon environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

Response: The Corps will update the cumulative impact section of the DEIS to include all known actions in the vicinity of the proposed project.

6. The District shall provide an updated mitigation plan that describes how unavoidable impacts to seagrass and hardbottom habitat shall be offset from port expansion activities. This plan should include clearly defined performance standards, monitoring protocols and schedule, and a functional assessment (e.g., Unified Mitigation Assessment Method, UMAM) that demonstrates how mitigation amounts offset the resource impacts. The plan shall address how the site selection for mitigation locations is supported by the best available literature. This plan shall be coordinated with NMFS for approval prior to commencement of any work.

Response: The Corps will update and provide a copy of the mitigation plan based on discussions with Federal, State and local agencies throughout the comment period. The plan will include a coordinated functional assessment which indicates how the individual mitigation components appropriately compensate for all unavoidable and minimized project impacts.

2008 PBS&J

Area	HB Acreage	notes
B-2 and C vertical	1.6	1
B-2 Horizontal	0.96	2
C	2.15	3
D	0.34	
G		
Totals	5.05	

2011 DCA

Area	HB Acreage	
C	2.075	4
D	0.37	
G		
Totals	2.445	

Average

Area	HB Acreage
B-2 vertical	0.8
B-2 Horizontal	0.48
C	2.1125
D	0.355
G	0
Totals	3.7475

notes

1. Hardbottom was categorized as 36% sand and 64% hardbottom coverage
2. Hardbottom was categorized as 52% sand and 48% hardbottom coverage
2. Hardbottom was categorized as 57% sand 43% hardbottom
3. Hardbottom was broken down into 2 categories, one with 80% hardbottom, one section with 50% hardbottom

State & Local Agency Comment Letters

Florida House of Representatives

Representative Patrick J. Rooney Jr.

District 85

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May 24, 2013

Angela Dunn, Biologist
Planning & Policy Division, Environmental Branch
US Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Re: USACE Draft Integrated Feasibility Report - EIS for LWI, PB Harbor

Dear Ms. Dunn:

I have been informed that the Army Corps of Engineers has prepared a Draft Integrated Feasibility Report and Environmental Impact Statement relating to proposed widening and deepening of channels at the Port of Palm Beach. This project would impact existing seagrass habitat that would need to be mitigated elsewhere. One of the potential seagrass mitigation sites includes a portion of Lake Worth Lagoon located within the Village of North Palm Beach known as Turtle Cove.

The Village of North Palm Beach and the residents of communities surrounding the Turtle Cove site have voiced concerns regarding the potential negative impacts resulting from such mitigation activities. The use of fill associated with the seagrass mitigation could result in the accumulation of silt adjacent to the docks and within the marinas that surround the Lagoon, as well as within the canal leading into Little Lake Worth. Mitigation activities may actually harm existing sea life within the currently pristine lagoon and interfere with both an established navigation channel and the riparian rights of surrounding property owners.

Seagrass mitigation activities in this particular site may actually do more harm than good; therefore, when selecting mitigation sites, I urge you to consider other areas with a greater potential to improve, rather than impair, the existing aquatic environment. Thank you for your consideration.

Best regards,

Patrick Rooney

State Representative Patrick Rooney Jr.
District 85

PR:slh

Committees:
Vice Chair: Regulatory Affairs Committee
Subcommittees:
Vice Chair: Health Quality Subcommittee
Healthy Families Subcommittee
Ethics & Elections Subcommittee
Agriculture & Natural Resources Subcommittee

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May 29, 2013

Ms. Angela E. Dunn
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: USACE Draft Integrated Feasibility Report – EIS for Lake Worth Inlet, Palm Beach Harbor

Dear Ms. Dunn:

The U.S. Army Corps of Engineers has prepared a Draft Integrated Feasibility Report/Environmental Impact Statement, dated April, 2013, for proposed construction activities at the Port of Palm Beach. The plan promulgated by the Army Corps would deepen and widen the channels within the Port. According to the EIS, the impacts caused by the project would include the loss of both seagrass habitat and hardbottom habitat, for which mitigation is required. The list of potential seagrass mitigation sites includes a portion of Lake Worth Lagoon, known as "Turtle Cove".

The purpose of this letter is to register a formal objection to seagrass mitigation activities within Turtle Cove and to request that the Turtle Cove site be removed from the list of potential mitigation sites. Last year, Palm Beach County applied for a permit from the Army Corps to cap approximately forty-two (42) acres of muck sediment with 640,000 cubic yards of sand within Turtle Cove in an effort to create 37.8 acres of seagrass habitat. A large portion of this area is immediately adjacent to two existing communities, Old Port Cove and Twelve Oaks, and one approved (although not yet constructed) multi-family development, the Water Club. In response to strenuous objections from the Village of North Palm Beach and other stakeholders, the County withdrew its permit application and stated this site would no longer be considered for seagrass mitigation activities.

While the seagrass mitigation activities proposed by the Army Corps may not be of the same magnitude as the County's prior application, the proposed project has the same potential for negative impacts to both adjacent properties and the Lagoon itself. Specifically:

- The fill is likely to result in the accumulation of silt adjacent to the docks around the Lagoon, at the entrance to and within the canal leading into Little Lake Worth, and within the marinas at Old Port Cove and Twelve Oaks (as well as the proposed marina at The Water Club), which lie directly in the path of the tidal flow. Obstructing the entrance to Little Lake Worth could result in a "dead zone" body of water. A prior fill operation near the Monastery property had similar impacts, even though this project was much closer to shore and out of the path of the tidal flow.

- The project could eradicate the existing sea life in the currently pristine Lagoon during the course of the project.

- The project would negatively impact navigation in the area, causing vessel congestion around the perimeter of the project. The project encroaches upon an existing, long-established marked and maintained navigation channel.

- The project would encroach on the riparian rights of surrounding property owners, decrease property values, and negatively impact the surrounding communities, requiring these property owners, including the marinas, to dredge and restore their waterfront.

Given that prior Munyon Island remediation projects have failed to substantially improve the aquatic environment, I am concerned that the proposed seagrass habitat will be neither viable nor nurtured. I do not believe that any potential benefits of the project, if realized, will outweigh the continued viability of Little Lake Worth, the impediments to navigation and the impairment of riparian rights in the general vicinity of the project.

Sincerely,

Hal R. Valeche

Hal R. Valeche
County Commissioner
District One

Cc: Mayor and Village Council
Village of North Palm Beach

TOWN OF PALM BEACH

Office of the Town Manager

June 3, 2013

Ms. Angela Dunn
United States Army Corps of Engineers
Planning Division, Environmental Branch
701 San Marco Boulevard
Jacksonville, Florida 32207-8175

Transmitted via FedEx and email at: Angela.E.Dunn@usace.army.mil

RE: OFFICIAL COMMENTS OF THE TOWN OF PALM BEACH ON THE LAKE WORTH INLET, PALM BEACH HARBOR, DRAFT FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT

Dear Ms. Dunn:

The Town of Palm Beach (Town) is concerned about the potential impacts to adjacent properties and residents' quality of life that would be caused by construction of the proposed expansion of the Port of Palm Beach. To ensure that our official comments would be substantive, constructive, and technically sound, the Town retained Costal Systems International, Inc. (CSI) to perform a detailed review of the draft environmental impact statement. The results of that review are enclosed. Please accept this letter and the enclosed report from CSI as the Town's preliminary official comments on this matter. If the Town Council directs any supplemental comments at its June 11 meeting, we will provide those supplemental comments to you by June 14.

The Town's primary concerns are as follows:

- The US Army Corps of Engineers (USACE) should pursue expansion of the currently authorized beach disposal area further to the south, as well as placement of beach compatible dredge material on either Mid-Town or Phipps Ocean Park/Reach 7 beaches whenever USACE and the Town may agree that such alternative disposal is desirable.

- We understand that the project may result in less frequent need for future maintenance dredging. We believe this may render upland properties south of the project more vulnerable to storm damage as the beach narrows between maintenance events due to the downdrift impacts caused by the Lake Worth Inlet. The Town requests that the effect of the proposed design of the initial placement and frequency of maintenance events be carefully evaluated and optimized relative to downdrift beach conditions over time. The Town also requests that

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beach conditions be monitored with establishment of a minimum beach profile condition that would trigger an additional maintenance event to ensure adequate continuous health of the downdrift beaches.

- The available geotechnical data does not seem to support the need for blasting as a construction method. In the absence of a comprehensive geotechnical survey and analysis, the Town is opposed to the use of blasting to construct the project. Although we understand that confined blasting has been identified as the least impactful option to dredge hard rock, Town residents still have concerns regarding the potential for damage to public and private property from such blasting. If sufficient geotechnical information is provided in the future that justifies the need for blasting to construct the project, the Town recommends that USACE include stringent specifications for noise and vibration monitoring limits in the project specifications (such as the Florida Department of Transportation standard).

- Although USACE modeling concluded that the elevation of water level within Lake Worth Lagoon will only increase in elevation by 0.1 meter after a storm event, we remain concerned about the potential for increased storm surge and hurricane impacts. Please present the calibration and background data associated with the USACE modeling so the Town can further evaluate USACE's determination with respect to potential flooding.

- The Town is concerned that larger vessels may throw larger wakes with the potential of causing damage to privately owned seawalls/bulkheads or otherwise causing erosion of private property. We urge USACE to carefully review its engineering analysis in this regard and/or to ensure its economic analysis accounts for this increased liability.

- The Town urges USACE to obtain an independent peer review of the economic analysis for this project to ensure the assumptions are sound and the conclusions (particularly related to job growth and positive cost/benefit ratio) are valid.

- The Town recommends that USACE identify a staging area that will be used for construction of this project, future maintenance projects, and other projects in the region. The staging area should be located as far as possible from any residential development, while avoiding impacts to submerged aquatic resources.

We appreciate the opportunity to submit our concerns and comments for the record and look forward to reviewing the additional information requested.

Sincerely,

Peter B. Elwell
Town Manager

PBE:cek
Enclosure
cc: Mayor and Town Council
H. Paul Brazil, Director of Public Works
Robert Weber, Coastal Coordinator

COASTAL SYSTEMS INTERNATIONAL, INC.
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2047 Vista Parkway, Suite 101 • West Palm Beach, Florida 33411
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275611.04

May 31, 2013

Mr. Paul Brazil
TOWN OF PALM BEACH
951 Old Okeechobee Road
West Palm Beach, Florida 33480

RE: COMMENTS IN RESPONSE TO THE TOWN OF PALM BEACH COMPREHENSIVE REVIEW OF THE LAKE WORTH INLET, PALM BEACH HARBOR, DRAFT FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT, TOWN OF PALM BEACH, PALM BEACH COUNTY, FLORIDA

Dear Mr. Brazil:

Pursuant to the Town of Palm Beach's (Town) request, Coastal Systems International, Inc. (Coastal Systems) conducted a comprehensive review of the Lake Worth Inlet Draft Integrated Feasibility Report and Environmental Impact Statement (DEIS), including all Appendices, to address the Town's interests and concerns regarding the technical content of the document. This document presents a summary of Coastal Systems' findings, comments, and concerns regarding the DEIS.

Draft Environmental Impact Statement

General Comments

1. The project is anticipated to reduce the frequency of required dredging [Operation and Maintenance (O&M)] with placement of beach compatible dredged material on the downdrift beaches. Town residents are concerned that less frequent maintenance events may render upland properties more vulnerable to storm damage as the beach narrows between events. More frequent bypass events that more closely mimic natural littoral drift, whether through O&M or Sand Transfer Plant operations, provide a more continuous source of sand to support the Town's beaches. The effect of the proposed design of the initial placement and frequency of maintenance events should be carefully evaluated and optimized relative to downdrift beach conditions over time. Beach conditions should be monitored with establishment of a minimum beach profile condition threshold that would trigger an additional maintenance event to ensure adequate continuous health of the downdrift beaches.

2. The U.S. Army Corps of Engineers (Corps) should consider an expansion of the currently authorized beach and nearshore disposal areas south of the inlet, as well as placement on Midtown beach and Phipps beach once the expanded disposal area is filled to capacity.

3. The available geotechnical data does not seem to support the need for blasting as a construction methodology. In the absence of a comprehensive geotechnical survey and analysis, the Town is opposed to the use of blasting to construct the project. Although we understand that confined blasting has been identified as the least impactful option to dredge hard rock, Town residents still have concerns regarding the potential for damage to public and private property from blasting in such close proximity to the Town. If sufficient geotechnical information is provided that justifies the need for blasting to construct the project, the Town recommends that the Corps include the DOT specifications for noise and vibration in the project specifications.

4. Although the Town understands that modeling demonstrates that the elevation within Lake Worth Lagoon will only increase by 0.1 meter, Town residents are still very concerned with potential increased storm surge and hurricane impacts. Please present the calibration and background data associated with the Corps modeling so the Town can further evaluate the Corps determination with respect to flooding.

5. We recommend that the Corps identify a staging area that will be used for construction of this project, future maintenance projects, and other projects in the region. The staging area should be located as far as possible from residential development, while avoiding impacts to submerged aquatic resources.

6. We are pleased to see that the DEIS and the Appendices, in several places, recognize the importance of placing as much suitable material as possible on the downdrift beach to mitigate for the inlet impacts on littoral processes and sand bypassing. That being said, the Town would like to understand whether any additional material could be placed on the downdrift beaches if it were appropriately sorted to remove larger rock and rubble. Additionally, please clarify whether the terms “suitable material” and “unsuitable material” used throughout the document include the potential for processing unsuitable material so that it can be made suitable for placement onshore or in the nearshore.

7. The Town requests that all beach quality material be placed on the downdrift beaches (above and/or below MHW) to mitigate inlet effects and is opposed to the use of any potentially beach compatible material to fill dredge holes to mitigate ecological impacts associated with this project.

8. We recommend conducting an assessment to ensure that the existing anchorage can accommodate the increased size of vessels, fully loaded, that this project will be targeting. We assume that it will take longer to unload larger fully loaded vessels than it currently takes to unload the vessels calling the Port.

9. We understand that the U.S. Army Corps of Engineers (Corps) prepared this particular DEIS using a new format that involves providing the majority of the technical information in the

Appendices rather than within the main text of the document. However, we suggest that summaries of pertinent information within the Appendices be included within the main text of the main National Environmental Policy Act (NEPA) document. Many portions of the document provide a brief summary of what the section is supposed to present pursuant to NEPA and then only a sentence or two specific to the Project with a reference to the appropriate Appendix.

10. Figures ES-2, ES-3, and ES-4, as well as the Figures labeled Chapter 2, Chapter 3, and Chapter 4 at the end of the DEIS have words missing or are illegible. There are words in black text over the aerial that are not legible and there is text in the middle of the channel that is cut off and cannot be read. Please revise the figures to ensure that all information is conveyed.

11. Several places in the document refer to the Biological Assessment provided to the National Marine Fisheries Service (NMFS) that can be found in Appendix E, Pertinent Correspondence (e.g. pages 2-30, 2-31, 5-10, 6-2). There are two Biological Assessments, one provided to the NMFS and one to the U.S. Fish & Wildlife Service (FWS), both located within Appendix D, Section 404(b) Evaluation. No Biological Assessments were contained in Appendix E, Pertinent Correspondence.

12. A comprehensive table of contents that references all sections and subsections, as well as their corresponding pages, would be a very useful reference.

13. The DEIS contains numerous typographical and grammatical errors and would benefit from being proofread prior to finalization.

1.0 Introduction

Study Background

This section states that the port is positioned well for growth, but there is no discussion regarding the growth of other ports in the vicinity that are being expanded to accommodate post-Panamax vessels. Will this port require future expansion to accommodate post-Panamax vessels in order to remain viable?

Purpose of this Report

1. This section states that “Based on modern vessel sizes, the port is operating with insufficient channel width and depth.” It is not clear what is meant by “modern vessel sizes”. The graphics presented in the executive summary indicate that the port was designed for “sub Panamax” vessels and the current proposal is to accommodate “Panamax” vessels.

2. Chapter 1.0 lists several related documents, as well as documents referenced in the DEIS. Additional documentation, including but not limited to, the Florida Department of Environmental Protection (DEP) Strategic Management Plan, Approved Inlet Management

Plan, and previous studies relative to inlet management should also be referenced in this section.

2.0 Existing/Future Conditions Lake Worth Inlet

1. The Port of Palm Beach Trade Routes Map should be enlarged for clearer reference.

2. For all "No Action Alternatives" the DEIS should state "Maintenance dredging would continue to occur." Section 2.5.15 "Public Safety-Future Without Project Conditions" accurately states this but the "No Action Alternatives" for many other categories evaluated herein do not.

2.1 General Setting

1. This section states that "High shoaling rates are a recurring problem in Palm Beach Harbor and lead to frequent maintenance dredging events to maintain navigable depths." As "frequent" implies several times a year, please refer to "unplanned" maintenance dredging events instead.

2. This section states "The sand transfer plant slurries the accumulated sand material with sea water, and passes it under the inlet through a pipeline." This section should reference the volume of sand bypassed by the sand transfer plant, as well as that bypassed by Corps O&M dredging, on an annualized average, as well as indicate that the sand transfer plant operates year round. These volumes are appropriate to reference in this DEIS as the document is evaluating the need for reduction in O&M frequency.

2.2.1 Overview – Commodities

1. This section states "Figure 2-2 depicts the major bulk commodity tonnages for the period 1996-2008 that are associated with the deepest draft vessels calling the port." There should be a discussion of the fact that historically the port was called on by sub-Panamax vessels and currently the port is being called on by light loaded Panamax vessels. This is pertinent to the understanding of the project purpose and need.

2. Figure 2-2 does not indicate that the project is warranted based on an assumption that vessel calls will increase to 2007 levels, without a concurrent discussion of the assumption that some commodities will be imported/exported in the future through ports that are expanding to accommodate post-Panamax vessels. Additional information should be added to support project need.

3. Figure 2-3 is labeled "Port of Palm Beach Future Commodity Growth Projections (2009-2067)"; however, it depicts 2017-2067 and does not include 2009-2017.

2.2.2 Overview – Fleet

To provide a fair comparison, all tables should reference the same date range. The tables listed in this section vary considerably: Table 2-1 (2007-2009), Figure 2-4 (1996-2010), Table 2-5 (2004-2010). To the extent that data is available, the date ranges should be made consistent.

2.2.3 Major Commodities

Cement and Asphalt - Existing Conditions: Commodity and Fleet

The DEIS attempts to justify project need through anticipated use of a currently idle facility. The section states "The facility is now idle but ready to return to service. This indicates that as soon as demand for cement rises, imports of cement will resume at normal rates, and should increase into the future along with the demand for new construction." Many of the assumptions in this section are based upon assumptions for growth, albeit conservative, that do not clearly support project need. Is more recent data now available regarding increase in demand for cement, based on recent increase in demand for new construction in South Florida?

Future Without-Project Conditions (No Action Alternative): Commodity and Fleet

1. This section states "Commodity: Nationwide, unadjusted growth in expenditures for residential construction remains slow but constant over the next 30 years after an expected rebound from recession levels (HIS Global Insight 30-year Focus, May, 2009)." A more recent reference to residential housing construction is appropriate for use here.

2. This section states "This volume has dropped off because of the decline in new construction, but it is expected to return to pre-recession levels by the base project year of 2017, as new construction rates return to normal." It is unclear as to what the definition for "normal" is in this context.

2.3.5 Navigation Restrictions

Future Without-Project Conditions (No Action Alternative)

This section states "The number of vessels will continue to increase…"; however, the number of vessels can only increase to the Port's capacity. This statement should have a realistic limit not an indication that it will increase indefinitely.

2.4.2 Operations and Maintenance

This section states that maintenance dredging has occurred 1 to 2 times per year. From 2004 to 2009, the average annual shoaling rate was 176,000 cubic yards. Please see additional comments below related to "Appendix A – Volume 1 Documents" relative to the sediment budget for the Inlet. The settling basin is designed to accommodate approximately 200,000 cubic yards for dredging events every two years, which equates to an annual bypassing rate of 100,000 cubic yards per year.

2.4.3 Dredged Material Placement

Other Beneficial Use Sites - Existing Conditions

The DEIS should present information on available dredge holes and artificial reef sites or at least indicate where in the document this information can be found.

Future Without-Project Conditions (No Action Alternative)

1. This section refers to the "sites mentioned above"; however, the section above does not identify or describe the sites or reference where in the document this information can be found.

2. As the 2011 State Programmatic Biological Opinion prohibits beach fill placement during the marine turtle nesting season, the DEIS should promote the evaluation of scheduling and beach fill placement alternatives to ensure that all beach compatible sand is placed along downdrift beaches. The DEIS states that sand can be placed downdrift in nearshore areas during the turtle nesting season. Further evaluation should be conducted to confirm the feasibility of expanding the sand placement template to the south, as well as placing sand further downdrift at Midtown and Phipps beach areas when the sand placement area downdrift of the inlet has been filled. The beach fill placement needs to be optimized for the estimated quantities (volumes), areas downdrift with the greatest need, and scheduling for efficient construction relative to environmental conditions including marine turtle nesting season. Dry beach placement is preferable to nearshore placement outside of sea turtle nesting season. The Town is available to assist the Corps with securing the necessary easements and permits for placement of sand on additional downdrift beach areas above and below mean high water (MHW).

2.4.6 Sand Transfer Plant

An appropriate sediment budget needs to be evaluated relative to the proposed settlement basin, advanced inlet maintenance, and continued operation of the sand transfer plant to ensure that the annual average volume of sand established in the DEP-approved Lake Worth Inlet Management Plan is bypassed.

2.5 Natural Environment

2.5.1 Vegetation

Existing Conditions

1. This section refers to Attachment 5 in Appendix D; however, the Attachments in this Appendix are not all labeled.

2. This section indicates that 14.6 acres of seagrass were present; however, it does not state the acreage of the survey area, what species or density was observed, or whether the 14.6 acres includes direct and/or indirect impact areas.

2.5.2 Threatened and Endangered Species

Johnson's Seagrass

This section should summarize the extent and density of Johnson's seagrass found in and around the project area.

Smalltooth Sawfish

This section states "At least one recorded observation has occurred within the vicinity of Palm Beach County". Coastal Systems International, Inc. has correspondence with NOAA providing more detailed sawfish sighting information in Palm Beach County, specifically: "There have been 53 sawfish sightings in Palm Beach County from 2000-2011, according to the National Sawfish Encounter Database. One was in Boynton Inlet, and the remaining sawfish were sighted in the Atlantic Ocean. There have been 5 sawfish sighted within roughly 2.5 miles of Palm Beach during that same time period" (personal communication with Amanda Frick from NOAA, October 12, 2011).

2.5.3 Fish and Wildlife Resources (Other Than Threatened and Endangered Species)

Existing Conditions

Reference to Bottlenose dolphins in this section should include their Latin name *Tursiops trancatus*.

2.5.5 Hardbottom Habitat

Existing Conditions

This section should include a summary of the hardbottom survey findings to include the size of the survey area and the types and acreages of hardbottom habitat found within and adjacent to the project area. Additionally, this section should reference the hardbottom survey that was conducted and indicate where in the Appendices it can be found.

2.5.6 Essential Fish Habit

Existing Conditions

This section should include a summary of the Essential Fish Habitat that was located within the project area, as well as refer to where the resource assessment survey report can be located within the Appendices.

Table 2-6

Title reads "Federally Managed Species of Fish that May Occur with the Project Area" but the table shows, in addition to fish, three species of shrimp and spiny lobster. The title should be changed to include invertebrates. Additionally, the genus of yellowtail snapper is incorrect; it should be *Ocyurus*.

Future Without-Project Conditions (No Action Alternative)

The No Action Alternative should consider the current condition, without the proposed project, which includes periodic maintenance dredging. There appears to be contradictory statements within this section that need clarification.

2.5.10 Air Quality
Existing Conditions
This section should include reference to the closest Palm Beach County air quality monitoring station to the Project site. Please provide a site map depicting this location, as well as the monitoring data specific to this location for both the past year and during the last Project.

Future Without-Project Conditions (No Action Alternative)
How will the no action alternative result in a continued increase in ship calls if there are a limited number of slips at the Port and vessels must wait in the offshore anchorage until berthing areas are available? There is clearly a limit as to the number of ships that can call the port. This section states that year 2067 estimates indicate 107 vessel calls, but this information is not compared to current vessel calls for reference.

2.5.11 Noise
Future Without-Project Conditions (No Action Alternative)
Please provide noise data associated with past maintenance dredging events, as well as data for ambient conditions in the future project location.

3.0 Plan Formulation

3.4 Constraints and Objectives
3.4.1 Constraints
Appropriate text needs to be incorporated relative to inlet management. Any channel improvements need to account for optimization of inlet bypassing. Inlet bypassing also minimizes channel shoaling. The DEP-approved Lake Worth Inlet Management Plan states that the impact of Lake Worth Inlet on the downdrift shoreline is at least nine miles south of the inlet and has resulted in a historical deficit of approximately 12,000,000 cubic yards.

3.5 Summary of Management Measures
This section states "Of the variety of measures considered during the feasibility phase, some were found infeasible due to technical, economic or environmental constraints, and are described below in the following sections." However, the listed items do not indicate which were eliminated from consideration and which are evaluated further. This section should include a brief explanation as to why certain items were not feasible and eliminated from more detailed consideration.

3.9 Environmental Minimization and Avoidance Efforts
Reviewing the geotechnical information provided in the Appendix, updated core borings and information is needed to fully evaluate the need for blasting. Construction means/methods, which could include punching, cutter suction dredging, or very limited blasting, should be further evaluated as the quantity, location, and characteristics of hard material are confirmed. Geophysical surveys could be conducted to correlate the wash probes conducted by the Town of

Palm Beach, and to optimize the core boring program so that additional and sufficient data is obtained in the areas anticipated to potentially consist of hard material.

4.0 Tentatively Selected Plan

1. This section refers to the plan formulation methods described in Chapter 3; however, Chapter 3 does not indicate why any actions were considered or eliminated from consideration.

2. As this document is both a Feasibility Study and an EIS, this section should explain the relationships between the Corps Preferred Alternative, Locally Preferred Plan, Tentatively Selected Plan, and the National Economic Development Plan.

3. Typically, there are several options eliminated from consideration and several options evaluated throughout the EIS. This document appears to eliminate several options, without a detailed description of why, and only considers one option for evaluation throughout the document. The EIS should evaluate several options that are potentially viable and the associated impacts of each.

4. The 112,950 cubic yards proposed to be dredged from the inner harbor should be placed in the nearshore. The seagrass mitigation can be completed with other dredged material, as this area can be filled with rock subsequently capped with seagrass compatible sand. It is imperative that all beach compatible sand be placed on the beach.

5. Much of the text in Figure 4-1 is illegible.

4.3 Mitigation

As the State requires mitigation to be assessed using the Uniform Mitigation Assessment Method (UMAM), the DEIS should provide the Corps UMAM scores for consideration in the DEIS rather than just presenting estimated ratios. This section should also summarize how the Corps arrived at the ratios provided.

4.3.1 Seagrass Mitigation Sites

It is unclear how the DEIS arrived at the estimated volume of material required to fill the seagrass mitigation dredge hole without selecting the dredge hole to be filled.

4.5 Dredging Methods

4.5.1 Dredging Techniques

1. This paragraphs references geotechnical information that indicates the majority of the material to be dredged may be able to be removed without rock pre-treatment. This paragraph contradicts Paragraph 3.9, which is recommending blasting and/or pre-treatment of areas with hard material.

2. The section states that the use of small or inappropriate dredges will be discouraged through the use of minimum monthly production standards or other language within the project

specifications. Consideration of a phased approach should be provided with smaller dredging equipment to maximize recovery of beach compatible sand. A phased approach should be considered to utilize smaller hydraulic cutterhead equipment to recover as much beach compatible sand as possible for placement on the downdrift beach. Larger cutter suction dredges are typically not able to recover sand over rock with a sheen of two to four feet in thickness. Therefore, smaller equipment can more efficiently recover this sand prior to utilizing the heavier equipment required to dredge material including areas of hard material.

4.8 Dredged Material Placement

1. This section states that near shore quality sand would be placed in the near shore (below the MHW line) between DEP range monuments R-76 to R-79; and this is a least-cost placement option. To maximize beach compatible sand placement area as part of the navigation project, the sand placement area downdrift of the inlet needs to be expanded and when this template is full, placement should include other downdrift areas such as Midtown and Phipps beaches.

2. Construction scheduling should be optimized with marine turtle nesting season to avoid any beach compatible sand being transported to the ODMDS and being permanently lost to the littoral system.

3. The paragraph states that placing material above the MHW line for a new project would incur large real estate costs, which would not make it a least-cost placement option. Therefore, this option is not considered to be part of the Tentatively Selected Plan. Further evaluation of options for sand placement above the MHW line, working in conjunction with the Town of Palm Beach, should be conducted to ensure all beach compatible fill is placed downdrift of the inlet.

5.0 Effects of the Tentatively Selected Plan

5.2 Economic Environment

5.2.2 Overview – Fleet

Future With-Project Conditions

This section indicates that there would be fewer vessel calls with the project. Has there been an evaluation to determine whether these ships could be unloaded with sufficient time to allow for additional vessels to call the Port? If vessels were unloaded more efficiently, there may be a resultant expansion of service provided by the Port with a concurrent increase in vessel calls.

5.3.4 Storm Surge

Future With-Project Conditions (Tentatively Selected Plan)

Please explain how the difference between with and without-project water-level elevations in the vicinity of the harbor were calculated.

5.4.3 Dredged Material Placement
Future With-Project Conditions (Tentatively Selected Plan)
Other Beneficial Use Sites

1. The Town of Palm Beach emphasizes the statement "Local interests strongly support the placement of beach compatible material on the beaches."

2. This paragraph states that dredged material could also be placed on the beach between DEP reference monuments R-78 and R-81, above the MHW line; which seems to contradict Paragraph 4.8. The placement of dredged material on the beaches would not occur from May 1 through October 31 due to nesting of sea turtles. If needed, material would be placed in the nearshore during this timeframe. Midtown Beach could be used for placement, if a non-federal entity is willing to pay the incremental cost difference. The Midtown beach fill template is located between DEP reference monuments R-90.4 and R-101.4. We recommend expansion of the currently authorized beach and nearshore disposal areas to the south of the inlet, as well as consideration for placement on Midtown beach and Phipps beach once the expanded disposal area is filled to capacity.

5.4.6 Sand Transfer Plant
Future With-Project Conditions (Tentatively Selected Plan)

1. This section states that there will be no change in the sand transfer plant as a result of the project. The effect on the operation of the transfer plant, including a review of the sediment budget, needs to be performed. The effects of waves and coastal processes on the updrift shoreline, including the area adjacent to the transfer plant, need to be fully evaluated. Refer to comments on the sediment budget under Paragraph 2.4.6. Recommendations for the coastal process study relative to the construction of a sediment trap is outlined in the DEP Lake Worth Inlet Management Plan. The Plan states that expansion of the sediment trap could have significant adverse impacts upon the shoreline adjacent to the north jetty. Suitable geotechnical and wave refraction studies should be conducted to demonstrate that expansion of the settling basin is a feasible activity. Furthermore, the proposed installation of sheet piling along the north jetty needs to be evaluated relative to any impacts to the sand transfer plant.

2. This section also discusses the pipeline within the harbor right of way, but the pipeline is located well beneath the bottom of the channel and will not be affected by the deepening of this project. The design and as-built information should be confirmed to ensure no impact to the underground pipelines.

5.5 Natural Environment
5.5.1 Vegetation
Future With-Project Conditions (Tentatively Selected Plan)
This section should include a summary of the mitigation ranges under discussion rather than simply referring to them in the Appendix. Additionally, the Habitat Equivalency Analysis (HEA)

and UMAM analyses should be included as an appendix and not listed as "available upon request". This information should be available for review and public comment in this DEIS.

Sea Turtles
Future With Project Conditions (Tentatively Selected Plan)
This section states that visual surveys for escarpments would be made immediately after completion of placement of dredged material. However, typically escarpment monitoring is required for three nesting seasons post placement with grading of escarpments that may interfere with sea turtle nesting.

Whales (Humpback and Sperm)
Future With Project Conditions (Tentatively Selected Plan)

1. The summary included in this section is a perfect example of what should be included in each section throughout the document. This section includes a brief summary and then refers to the Appendix for additional information.

2. This section discusses blasting; however, it does not specify whether confined or unconfined blasting will be used. It seems to describe confined blasting. Please clarify whether any unconfined blasting would be authorized for project construction.

Johnson's Seagrass
Future With Project Conditions (Tentatively Selected Plan)
This section refers to the mitigation in Section 4.3, without stating what the range of mitigation being considered is. This section also states that the HEA and UMAM analyses are available upon request. These functional assessments should be included as an appendix to the DEIS so that they can be reviewed and comments can be provided by the public.

5.5.3 Fish and Wildlife Resources
Migratory Birds
Future With Project Conditions (Tentatively Selected Plan)
This section states that the Corps standard migratory bird protection conditions would be implemented if construction will be performed from April 1 to August 31; however, it does not present the conditions or provide a link or reference to them for review and consideration.

5.5.4 Hardbottom Habitat
Future With project conditions (Tentatively Selected Plan)
This section should refer to the range of mitigation being considered in addition to referring to Section 4.3 and the Mitigation Plan in Appendix D Attachment 3 and should provide the HEA and UMAM models, not just refer to them as available upon request.

Section 5.5.5 EFH
Future With Project Conditions (Tentatively Selected Plan)
This section should present a summary of Appendix D Attachment 7 and not just simply refer to it.

5.5.7 Water Quality
Future With Project Conditions (Tentatively Selected Plan)
This section states "Various protective measures and monitoring programs would be conducted during construction to ensure compliance with state water quality standards." However, these measures and programs are not presented for review, consideration, and comment.

5.5.9 Air Quality
Future With Project Conditions (Tentatively Selected Plan)

1. Please indicate how the Corps determined "Short term impacts from dredge emissions and other construction equipment associated with the tentatively selected plan would not significantly impact air quality".

2. This section states "The project allows for a shift from smaller, less efficient ships to larger more efficient ships carrying more cargo without increasing the overall number of vessel calls consistent with the national trends detailed in the IWR 2012." However, this section does not seem to take into account the additional emissions from equipment to unload the additional cargo from the same number of vessel calls or the additional trucks to transport this additional cargo to/from the port.

5.5.11 Aesthetic Resources
Future With Project Conditions (Tentatively Selected Plan)
The temporary impacts would be of longer duration than typical O&M dredging. This section should specify the anticipated dredging duration as well as the typical O&M duration.

5.5.12 Recreation Resources
Future With Project Conditions (Tentatively Selected Plan)
The temporary impacts would be of longer duration than typical O&M dredging. This section should specify the anticipated dredging duration as well as the typical O&M duration.

5.5.4 Cumulative Impacts
Summary of Cumulative Effects Assessment
What was the "vicinity" considered for this cumulative impacts analysis? It is unclear whether this analysis was limited to Palm Beach County, southeast Florida, or the east coast of Florida. As several ports along the east coast of Florida are considering expansion, we respectfully request that the cumulative impacts analysis include the entire east coast of Florida. This assessment doesn't seem to consider any alternatives beyond Lake Worth Inlet.

5.5.10 Noise
Future With-Project Conditions (Tentatively Selected Plan)
This section should reference compliance with the Town of Pam Beach Noise Ordinance §42-226 - §42-229 for all construction operations within Town limits.

6.0 Environmental Compliance

This Section was reviewed and we do not have any comments.

7.0 Recommendations

This Section was reviewed and we do not have any comments.

8.0 List of Preparers

This Section was reviewed and we do not have any comments.

9.0 References

This Section was reviewed and we do not have any comments.

Appendix A, Volume 1 - Hydrodynamic Modeling

Specific Comments and Recommendations:

1. Table T-3 - The total estimate of dredging quantities is 1,897,750 cy, of which 458,000 cy of material is proposed to be placed in the nearshore area along the Town of Palm Beach. Based on updated geotechnical studies, a review of the geotechnical, survey, and dredging design data should be conducted to maximize the dredging and subsequent bypassing of beach compatible sand to downdrift beaches. The 458,000 cy estimated quantity is relatively large, and opportunities for placement further downdrift should be evaluated to avoid disposal of any beach compatible sand to the ODMDS. In accordance with the Lake Worth Inlet Management Plan, placement of beach compatible sand should be in areas of greatest need.

2. Page 5 - A cell size of less than 33 feet (10 m) on the north and south beaches and at the Project site for the CMS-FLOW model is recommended to correctly represent potential eddies and flow patterns, longshore sediment transport rate, and shoaling rates for the Entrance Channel and Settling Basins. The cell sizes established by the Corps are not of appropriate size for simulation of these coastal processes.

3. Page 5 - A cell size of less than 33 feet (10 m) on the north and south beaches and at the project site for the CMS-WAVE model is recommended to correctly represent wave

breaking, and breaking-wave generated currents. The cell sizes established by the Corps are not of appropriate size for simulation of these coastal processes.

4. Page 8 - The hydrodynamic model domain is approximately 15,800 feet by 15,800 feet. The domain is generally too small to appropriately represent offshore open boundary conditions and flow patterns in the vicinity of Project site. A larger domain is recommended.

5. Page 10 - The selection of associated parameter values used in the CMS model need to be presented in the modeling report. The parameters include flooding and drying, eddy viscosity, bed friction, wave breaking, sediment grain size, and sediment transport formulation and parameters. Refer to DEP's *Guidelines for Documenting Numerical Model Studies in Submittals to the FDEP Bureau of Beaches and Coastal Systems (BBCS*) for additional information.

6. Page 13 – Tidal current measurements at the entrance channel location and ebb shoal area are recommended to refine the hydrodynamic model.

7. Page 32 - An updated sediment budget should be prepared for the inlet system, to include downdrift beaches within the Town, so that the maintenance dredging intervals and associated volumes of dredged material are clearly understood.

8. Page 32 - Based on the estimated one year total maintenance volume of 100,000 cy/yr, the two year total maintenance volume should be less than 200,000 cy/2 yr, because the bathymetry will be balanced by the hydrodynamic forcing after one year. After one year, the sediment from updrift beach will be transported to offshore deep water region or bypassed to downdrift region. This estimated total maintenance volume should be further investigated.

9. Page 32 and Page A-3 - The predicted shoaling rates (30,000 cy/yr and 70,000 cy/yr) in the modeling report are not consistent with shoaling rates (33,000 cy/yr and 68,000 cy/yr) in Section B.8 Shoaling.

<u>General Comments and Recommendations</u>

1. There was no simulation of the placement of beach fill in the proposed nearshore areas downdrift of the inlet. Further numerical modeling is required to optimize the beach fill placement and to avoid/minimize impacts to adjacent marine resources such as nearshore hardbottom. Modeling iterations are recommended to evaluate shoreline performance to optimize the beach fill design to maximize the beach fill placed during the initial dredging construction, as well as follow-up maintenance events (estimated at 24 events).

2. The modeling simulates shoaling rates; however, the engineering recommendations rely on historical sedimentation rates. Further modeling and calibration is recommended to correlate historical sedimentation with the coastal process simulation.

3. Sedimentation and shoaling is discussed throughout the report, but the sediment grain size and estimated sedimentation rate is not referenced.

4. The references in the attachment do not reference the Lake Worth Inlet Management Plan (adopted by the DEP in 1996). This plan references the need to bypass 171,300 cy/year; which is not consistent with the estimated sedimentation rate of 100,000 cy/yr.

5. As part of the sediment budget, a review of the performance of the existing sand bypassing plant should be performed to understand the effects of the settlement basin on the operations, and potentially the efficiency, of this plant.

6. A cursory review of the ship simulation study was completed. The study was generally conducted in accordance with industry practice to optimize the inlet improvements relative to vessel navigation.

7. An updated and optimized sediment budget for the inlet should be developed, based on updated monitoring and historical dredging records. Appropriate coastal management documents should be referenced including the Lake Worth Inlet Management Plan adopted by the DEP in 1996, which references data from 1974 – 1994, and associated bypassing goals and the strategic Beach Management Plan adopted by the DEP in 2008.

Appendix A, Attachment C (Volume 2) – Geotechnical

Specific Comments and Recommendations:

1. Page 5 - A review of the geotechnical report indicated the feasibility study had minimal geotechnical information for preparation, design, and construction recommendations. There was discussion of hard limestone layers towards the lower elevations of the design depth, however sufficient information was not available to evaluate the need for blasting. Large cutterhead dredges have been used effectively in several Florida inlet and navigation projects to avoid the need for blasting. The DEIS states that Geotechnical data indicate that the majority of the material to be dredged may be able to be removed without rock pre-treatment (although additional core borings will provide more specific information regarding positions of massive hardened materials during the PED phase of the project). If the harder rock material areas are small enough, mechanical methods, including punching may be also be effective to avoid the need for blasting.

2. Page 9 - The Appendix discussed further engineering and design to be completed as part of the jetty stability analysis, however a monitoring program for a minimum of five years is recommended to include appropriate surveys. The sheet pile extension and other design parameters should be reviewed relative to adjacent coastal structure stability.

3. Page 10 - Further evaluation of the south jetty relative the condition and stability after deepening is required. The appendix references an inadequate factor of safety for slope stability that needs to be addressed.

4. Page 17 and Page 18 - The proposed settlement basin should be added to Plates 2 and 3 for clarity.

Appendix A, Attachment C (Volume 3a) – Boring Logs

This section contains boring logs and laboratory results for the entrance channel, area A-1, and area B-2. These data were used in the general and specific comments and recommendations detailed above in *Attachment C*. No specific comments or recommendations were found in the data.

Appendix A, Attachment C (Volume 3b) – Boring Logs

This section is a continuation of the preceding section and contains boring logs and laboratory results for the entrance channel, area A-1, and area B-2. These data were used in the general and specific comments and recommendations detailed above in Attachment C. No specific comments or recommendations were found in the data.

Appendix A, Attachment D (Volume 4) – Value Engineering Report

Specific Comments and Recommendations:

1. Page 7 - The Tentatively Selected Plan states that the "total dredged material quantity of approximately 1.2 million cy of which 200,000 cy is designated for hydraulic beach fill re-nourishment and 1 million cy to be sent via scow barge transport to the designated ODMDS. These values are not consistent with other sections of the DEIS and should be further investigated or revised to determine their impacts on the economic impacts of the proposed project.

2. Page 27 – It does not appear that sufficient studies were completed to investigate the efficacy and subsequent optimization of placement of beach quality material along adjacent beaches. Multiple requests were made for this including a letter dated January 22, 2008, from Palm Beach County requesting the placement of beach quality material to be placed on the beach. Further validation and consistency of dredge and placement volumes should be presented.

General Comments and Recommendations:

Recreational uses are important and are economic generators. The economic impact of the Project, both positive and negative, is not fully addressed. The DEIS appears to only address the direct economic impacts on the Port (e.g. commodities, cargo, and cruise ships) but not on other

industries in the Town and County. Temporary and long-term economic impacts occurring during construction and operations should be identified and addressed in greater detail. These impacts may include, but are not limited to loss of revenue to local small business, access restrictions for recreational activities, natural resources, and increased security and maintenance expenditures along the shoreline resulting from increased vessel wakes, traffic, inlet downtime due to maintenance dredging, and other associated impacts.

Appendix B – Cost Engineering and Risk Analysis

Specific Comments and Recommendations:

1. Section 3.1 - The DEIS refers the reader to the Economic Appendix for further discussion of the Maintenance costs. While maintenance costs of the channel, jetty, and Port are presented, this Attachment states "The study and presentation does not include consideration for the life cycle costs." This appears to be inconsistent and should be clarified.

2. Indirect costs to the Town and County required during future O & M dredging events should be addressed and may include increased security, safety, administration, and education programs. The sediment budget and settling basin design should be further refined and discussed to ensure costs associated with operations of the sand transfer plant are incorporated. Also, the potential long-term dredged material placement plan and corresponding cost benefits associated with placement in an expanded beach placement area downdrift of the inlet, as well as placement in Midtown or Phipps when the fill template south of the inlet is filled, should be discussed.

General Comments and Recommendations:

1. The proximity of Peanut Island to the channel is well documented. However, the risk and economic impacts to the Park and associated facilities should be addressed in greater detail. Indirect revenue impacts to local business created by Park visitors including water taxi services, recreational value and resources which may be impacted due to vessel wakes or wave activity, and repair and maintenance costs associated with shoreline or infrastructure damage on the Island should be addressed and minimized. Changes to beach slope and stability, and potential repairs on southern shoreline resulting from a wider channel and hydrodynamic changes should be discussed. Further, any changes to the wave climate impacting moored vessels on Peanut Island and activity at the fishing pier and the snorkeling lagoon should be addressed.

2. The effects of the project on the restoration of existing business should be further investigated as some in the local business community feel that the current restrictions at the Port have caused cumulative economic impacts dating back many years. These impacts include lost revenue to Port, lost jobs, increased commodity and consumer goods prices.

Discussion of past impacts should be included to further justify the Project and potential impacts to stakeholders.

Appendix C – Socio-Economic Appendix

Specific Comments and Recommendations:

1. This Appendix states on page 2 that no other port in South Florida can accommodate the specialized equipment for handling sugar and molasses. It is unclear as to why no other port in South Florida could purchase and install such equipment.

2. On page 46 this Appendix states "…it was assumed that increased efficiencies would reduce transportation costs without affecting the demand for import and export of goods through the harbor. This means that the commodity tonnages forecast to be transited through Palm Beach Harbor are expected to move with or without the proposed improvements." This statement emphasizes that fact that without the proposed project, the port will remain viable and confirms that the impacts associated with the proposed project may not be justified.

3. Page 52 states that the only alternatives considered were widening only and for each 1 foot incremental depth, deepening from 34 feet to 43 feet with widening for the NED analysis. It seems that other alternatives, including vessel calls at other ports should be considered.

Appendix D – Environmental

This Appendix would benefit greatly from a Table of Contents with page references.

404(b) Evaluation

Each section below should be addressed for each potential placement location, specifically, beach, nearshore, dredge hole, ODMDS, and artificial reef site.

I. Project Description
e. Description of the Proposed Discharge Site(s)
(1) Location

The 404(b) Evaluation states "It is anticipated that all of the material to be excavated from the entrance channel up to Station 45+00 would be placed in the nearshore placement area, located below mean high water line, with the exception of the amount which would be used to mitigate for seagrasses." The Town of Palm Beach strongly opposes this plan, as the Town's shoreline has suffered from the downdrift effects of Lake Worth Inlet since it was constructed in the 1920's. The Town strongly urges that all beach compatible material be placed on the downdrift beaches to mitigate the inlet effects realized by the Town. The mitigation can be accomplished with other dredged spoil material and capped with material procured from upland sources. The Town recommends that the capping sediment be specifically prescribed to match the sediment characterization immediately surrounding the dredge hole to be filled, as is required by Biscayne

National Park to implement the extremely successful seagrass restoration projects within the National Park.

This section states that the remainder of the material would be placed at the Palm Beach ODMDS. The Town respectfully requests that the remainder of the material be screened to capture any potentially beach compatible material for beach placement rather than disposing of beach compatible material that is mixed with rock and rubble in the ODMDS. As obtaining beach compatible fill from diminishing offshore reserves and upland sources is extremely expensive; it is likely that sorting this material could produce a cost effective source of additional fill for the Town, as well as further mitigate the downdrift effects of Lake Worth Inlet.

(2) Size
The 404(b) Evaluation states "Near shore quality sand would be placed in the near shore (below the MHW line) between DEP range monuments R-79 to R-79, used for mitigation or placed in the designated ODMDS." The Town strongly objects to the placement of nearshore quality beach sand as mitigation or in the ODMDS. All beach compatible material should be placed within the Town of Palm Beach to mitigate the downdrift effects of the inlet.

II. Factual Determinations
a. Physical Substrate Determinations
(1) Substrate Elevation and Slope:
This section does not indicate what location (beach, dredge hole, ODMDS, etc.) is being discussed and states that "The material would be placed below mean low water to elevation -16." This does not indicate slope as described in the section title, nor does it specify which disposal site is being considered.

(2) Sediment Type
This section states "The material to be disposed in the nearshore would be silty sand in nature." Previous references to this material indicate that it has low silt although material with higher silt would be disposed of in the near shore as opposed to above MHW. Silty sand that is not beach quality may adversely affect nearshore hardbottom. This section does not indicate what location (beach, dredge hole, ODMDS) is being discussed.

(3) Dredged Material Movement
This section does not indicate what location (beach, dredge hole, ODMDS) is being discussed.

(6) Actions Taken to Minimize Impacts
This section refers to "BMPs and other benthic protection measures" that are being coordinated with the regulatory agencies. The BMPs and other benthic protection measures should be presented for review and consideration herein.

b. Water Circulation. Fluctuation and Salinity Determinations
(5) Actions that will be taken to minimize impacts
This section indicates that BMPs and other benthic protection measures have been coordinated with the resource agencies to minimize impacts. These BMPs and other benthic protection measures should be presented herein for consideration.

e. Aquatic Ecosystem and Organism Determinations
(4) Actions that will be taken to minimize impacts
This section states that BMPs and other benthic protection measures have been coordinated with the resource agencies to minimize impacts. These BMPs and other benthic protection measures should be presented herein for consideration.

(5) Effects on Special Aquatic Sites
This section states that there are no hard ground or coral reef communities located in the immediate nearshore area that would be impacted by disposal activities. This section needs to consider indirect and cumulative effects of the placement of fill in the nearshore. There are nearshore exposed hardbottom communities downdrift of the placement area that must be considered in this section.

(6) Threatened and Endangered Species
This section states that appropriate measures to avoid, minimize, and mitigate for impacts to listed species have been fully coordinated with NMFS and USFWS. These measures should be presented in this section and in the DEIS for review and comment.

(8) Actions to Minimize Impacts
This section states that BMPs will be followed. The BMPs being referred to should be presented for review.

g. Determination of Cumulative effects on the Aquatic Ecosystem
This section states that there would be no cumulative impacts that result in a major impairment. This section should recognize the cumulative impacts associated with adding material to the sediment starved ecosystem downdrift of the project area. As the inlet has caused significant erosion to the downdrift shoreline, substantial hardbottom that would be buried but for the opening of the inlet and offshore disposal of dredged material through the years, has become exposed. Mitigating this inlet effect may cause cumulative impacts that would rebury this nearshore exposed hardbottom.

III. Findings of Compliance or Non-Compliance with the Restrictions on Discharge
b. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site which would have Less Adverse Impact on the Aquatic Ecosystem
The following statement does not appear to pertain to this 404(b)(1) evaluation: “To test the suitability upland sand sources the borrow areas proposed by the contractor would be used for this project. In addition, the impacts of using other sources on cultural resources, protected

species, and other environmental factors would likely be equal to or greater than the impacts of the proposed action."

h. Appropriate and Practicable Steps Taken to Minimize Potential Adverse Impacts of the Discharge on the Aquatic Ecosystem

The Turbidity Monitoring Plan has not been presented for review or consideration. Additionally the measures taken to minimize sediment deposition on sensitive reef organisms have not been presented for review.

Coastal Zone Management Act and Florida Coastal Zone Management Program Federal Consistency Determination

1. Chapter 161, Beach and Shore Protection

This section states "Information will be submitted to the State for a permit in compliance with this Chapter." The Town fully supports the Corps securing appropriate State permits for the proposed work.

4. Chapter 253, State Lands

This section states "Appropriate State permits will be obtained for this Project." The Town fully supports the Corps securing appropriate State authorization for the proposed work.

Appendix D Mitigation Plan

This appendix refers to ten mitigation sites; however, Figure 1 only shows 9 potential mitigation sites, not 10.

3.0 Mitigation Requirements

3.2 Hardbottom

It is the Town's understanding that the DEP requires the use of UMAM for assessing all mitigation. According to the DEIS (though not presented within the document) the Corps used UMAM to assess the seagrass impacts. However, according to the DEIS (though not presented within the document) the Corps used HEA to assess hardbottom impacts.

This section refers to the tables and calculations of the HEA included in Appendix ZZ; however, Appendix ZZ was not included for review.

4.1 Seagrass Restoration

This section refers to "the Town of Palm Beach Environmental Resource Management Davision". Please revise this reference to indicate the Palm Beach County Department of Environmental Resources Management.

4.1.1 Conceptual Seagrass Site Design

Will any geotechnical analysis of the native seagrass substrate be done to ensure that the capping material is consistent with the native sediments to ensure success? This is routinely required for

restoration projects within Biscayne National Park and is recommended for success of this restoration project. This section simply states that material will have less than 20% fines and will be required to match as closely as possible to characteristics of the surrounding material.

Will filling of the dredge hole allow for impacts to sparse seagrass resources growing along the side slopes of the existing dredge holes to achieve success of the overall project? Although this practice had not been allowed by regulatory agencies for many years in Miami-Dade County, it was recently authorized for the Miami Harbor Phase III project. This section states that some resources may be covered by material on the narrow eroded shelf described earlier that occurs between natural grade and the sharp drop (see figure 4), but it is unclear whether impacts to seagrass growing on the side slopes of the dredge hole would be authorized.

The Corps may want to review the mitigation plans and monitoring reports associated with the dredge hole fill projects recently constructed within Lake Worth Lagoon in association with the Rybovich Marina improvements.

The sections on transport, turbidity control, site grading, and planting refer to "the site" indicating that the site has sufficient depth and room to enter, exit, and turn the barge, when previously, the document indicated that the site has not been selected yet. Please clarify whether this plan is referring to a specific site or if the site is still being selected.

In our experience, larger mitigation areas will not achieve success criteria and climax communities within five years without both planting of donor material and installation and maintenance of bird roosting stakes. If planting is prescribed, donor seagrass bed locations should be presented herein for evaluation. Additionally, typically shoal grass is planted to stabilize the newly placed substrate and allow colonization of climax species. We do not recommend waiting three years to initiate planting. If the Corps will be waiting three years, a much longer time lag should be utilized in the UMAM, which will result in a greater mitigation requirement. The UMAM scoring sheets should be provided for review and evaluation during this public comment period.

The Corps should consider implementing the protocols developed for the Miami Harbor Segment III seagrass mitigation be implemented to ensure success of the mitigation associated with this project.

5.0 Adaptive Management

The Corps should consider planting of seagrass and installation and maintenance of bird stakes at initial mitigation construction (after sediment has settled) rather than as an adaptive management technique in order to achieve the prescribed success criteria within five years.

Attachment 4
Cost effective incremental Cost Analysis (CEICA) for Mitigation

2.1 Methodology of Establishing Seagrass

Please indicate what the time scale was for Palm Beach County Department of Environmental Resources Management to achieve success associated with filling dredge holes for seagrass restoration. Was the time scale comparable to the five years prescribed for this project? It is assumed that a five year time lag was utilized based upon the five year monitoring duration; however, this cannot be confirmed because the UMAM score sheets have not been included in the DEIS.

2.2 Seagrass Mitigation Benefits

This section refers to impacts as 4-5 acres based on HEA model output. The DEIS indicates elsewhere that seagrass "mitigation was calculated using UMAM. How was HEA "output" utilized to quantify seagrass "impacts"? Please clarify whether seagrass mitigation was calculated using HEA or UMAM.

2.3 Seagrass Alternatives

This section is entitled Seagrass Alternatives, but seems to present information on both seagrass and hardbottom as stated in the first sentence.

This section (paragraph) seems to be incomplete. It presents 13 locations and then states that there are 5 sites remaining. It provides a brief rationale for eliminating two sites; however, it does not provide a rationale for eliminating the remainder of the sites considered.

3.2 Hardbottom Alternatives

This section is populated with the same text as Section 2.3 Seagrass Alternatives and is specific to ruling out the seagrass mitigation sites; this section does not speak to hardbottom alternatives at all.

3.3 Hardbottom site

Please explain why is it "more environmentally acceptable to do all the mitigation at one site"? Although this may be the case, it is likely dependent upon the distance between the sites and the existing bathymetry within the sites.

Seagrass Survey Final Report January 2012 Dial Cordy & Associates

This Appendix was reviewed and we do not have any comments.

Biological Assessment to National Marine Fisheries Service

The DEIS indicates in several places that the biological assessment can be found in Appendix E Correspondence. This document is located in Appendix D.

The Biological (BA) states on page 2 that "All beach quality sand material shall be placed on the existing beach disposal template just south of the inlet (figure 2). Sandy material not considered beach quality under the existing permit will be placed in the authorized nearshore placement site south of the inlet." The Town strongly supports this statement and opposes using beach quality sand for capping the mitigation site.

The Protective Measures referenced in the DEIS are described on page 34 of the Environmental Assessment (EA) to the National Marine Fisheries Service. Nowhere in the DEIS does it tell you where these protective measures are referenced.

Biological Assessment to the U.S. Fish & Wildlife Service

The BA states on page 2 that "All beach quality sand material shall be placed on the existing beach disposal template just south of the inlet (figure 2). Sandy material not considered beach quality under the existing permit will be placed in the authorized nearshore placement site south of the inlet." The Town strongly supports this statement and opposes using beach quality sand for capping the mitigation site.

The Protective Measures referenced in the DEIS are described on page 15 of the EA to the U.S. Fish & Wildlife Service. Nowhere in the DEIS does it tell you where these protective measures are referenced.

The specific details and photographs regarding confined blasting within this BA are appreciated. It would be beneficial to present an Appendix with additional information regarding the documentation collected to date on confined blasting.

This BA does not appear to consider the effects of ship lighting and port lighting on nesting sea turtles. These impacts are not sufficiently addressed in the State Programmatic Biological Opinion.

Attachment 7 Essential Fish Habitat (Affected Environment)

The project area is known to be a critically important snook spawning site. There is no discussion of the importance of this snook rookery in the EFH assessment. The importance of this area to the life cycle of the snook should be considered for inclusion into the EFH assessment.

Appendix E – Correspondence

Throughout the text in several places, the DEIS indicates that the BA is located in Appendix E – Correspondence. The BAs, for species under the purview of the National Marine Fisheries Service and species under the purview of the Fish & Wildlife Service, are both located in Appendix D – 404(b) Evaluation.

Appendix F – Real Estate Plan

This Appendix was reviewed and we do not have any comments.

Appendix G Dredged Material Management Plans

This Appendix was reviewed and we do not have any comments.

Thank you for the opportunity to review the DEIS on behalf of the Town. Should you have any questions or require additional information, please do not hesitate to contact me at (561) 478-1004 or pcutt@coastalsystemsint.com.

Sincerely,
COASTAL SYSTEMS INTERNATIONAL, INC.

Penny Cutt
Environmental/Permitting Regional Manager

TOWN OF PALM BEACH SHORES

247 Edwards Lane, Palm Beach Shores, Florida 33404-5792
Ph: (561) 844-3457 • Fax: (561) 863-1350
www.palmbeachshoresfl.us

June 3, 2013

Ms. Angela Dunn
United States Army Corps of Engineers
Planning Division, Environmental Branch
701 San Marco Boulevard
Jacksonville, FL 32207-8175

Transmitted via email to: Angela.E.Dunn@usace.army.mil

RE: Official Comments from the Town of Palm Beach Shores on the Lake Worth Inlet, Palm Beach Harbor Draft Feasibility Report and Environmental Impact Statement

Dear Ms. Dunn:

The Town of Palm Beach Shores has concerns about the impact on the Town's property and residents during the dredging of the Palm Beach Inlet as outlined in the Draft Feasibility Report and Environmental Impact Statement. This letter outlines the concerns that we have voiced at meetings regarding this, and every other inlet dredging project.

First, we agree with all of the issues raised in the letter to you on this subject dated June 3, 2013 from the Town of Palm Beach. These include the following:

- Proper beach disposal of sand and debris
- Ongoing evaluation of the maintenance schedule
- No blasting or stringent specifications if deemed unavoidable
- Further information on resulting storm surge projections
- Projections of wake damage from larger vessels
- Further evaluation of the economic impact data for validation
- Identification of an appropriate staging area

Second, we have a number of additional concerns based on our experiences with previous dredging operations in the Palm Beach Inlet.

- The diesel fumes from the dredges and associated tug boats are noxious and potentially hazardous to the health of our residents. We request that you include proper air quality standards in your bid packages and provide proper monitoring of such.
- In addition to the fumes, the Town urges the USACE to include proper noise abatement in the bid requirements and provide proper monitoring of those as well.
- The Town urges the USACE to schedule the dredging outside of tourist season (January – March) and during daylight hours to minimize negative impact on seasonal residents and the businesses that cater to them.

We appreciate the opportunity to submit our concerns for the record and look forward to your response and cooperation.

Sincerely,

John Workman

John Workman
Mayor

Department of Environmental
Resources Management
2300 North Jog Road 4th Floor
West Palm Beach FL 33411-2743
(561) 233-2400
FAX (561) 233-2414
www.pbcgov.org/erm

June 3, 2013

Ms. Angela Dunn
Planning Division (PD-EC)
US Army Corps of Engineers
PO Box 4970
Jacksonville, Florida 32232-0019

SUBJECT: PALM BEACH HARBOR DRAFT EIS/FEASIBILITY STUDY

Dear Ms. Dunn:

The Department of Environmental Resources Management (ERM) has conducted a preliminary review of the draft EIS/feasibility study for the proposed expansion of Palm Beach Harbor and Lake Worth Inlet. In general, it is a well thought out plan that attempts to minimize the proposed impacts. Currently the project will impact an estimated 4.5 acres of sea grasses and 4.9 acres of low relief hardbottom habitat. Progress has been made in reducing impacts but many of the issues raised in our 2008 comment letter (enclosed) are still relevant. Additional comments can be found below.

CONSTRUCTION COMMENTS

- The project will generate approximately 1.4 million cubic yards of non-beach compatible material. The report states that non-beach compatible material will be placed at the Palm Beach Ocean Dredged Material Disposal Site (ODMDS) 4.5 miles offshore of the project. This material is a valuable resource that is compatible with Lake Worth Lagoon restoration projects. This material should be identified for beneficial re-use within the Lake Worth Lagoon. The Peanut Island/Snook Islands project is a perfect example of beneficial re-use of similar dredged material to create seagrass, mangrove, and oyster habitat.
- There will be some large rock within the non-beach compatible material that can be used to create valuable reef habitat.
- The widening of the inner channel has the potential to destabilize the southern shore of Peanut Island We recommend the construction of breakwaters along the shoreline to serve a dual function of shoreline protection and habitat creation.

MITIGATION COMMENTS

- The plan suggests that only about 113,000 cubic yards of sand would be needed to create seagrass mitigation. Depending on the type of sediments present in a dredge hole, this quantity could be grossly underestimated if the muck in the hole is deep.

- Some holes in the Lake Worth Lagoon have been partially or completely filled. Please coordinate with Palm Beach County on selection of final seagrass mitigation sites as restoration activities are ongoing.
- The mitigation work could be conducted in partnership with Palm Beach County in order to maximize benefit within the Lake Worth Lagoon and in the nearshore waters outside the inlet. Our staff has extensive experience constructing habitat restoration and mitigation projects.

In summary, the EIS is thorough and the tentatively selected plan appears to minimize impacts to resources. Thank you for the opportunity to provide comments. Please call me at 561-233-2400 if you have any questions.

Sincerely,

Robert Robbins, Director
Environmental Resources Management

RR:RB:dab
Enclosures

c: (w/ enclosures):
Robert Weisman, County Administrator
Manuel Almira, Director, Port of Palm Beach
Peter Elwell, Town Manager, Town of Palm Beach
Cynthia Lindscoog, Town Administrator, Town of Palm Beach Shores
Ruth C. Jones, City Manager, Riviera Beach
Edward Mitchell, City Administrator, West Palm Beach
Eric Call, Director, PBC Parks and Recreation
David Roach, Executive Director, FIND

1-22-08
File - PD

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2300 North Jog Road, 4th Floor
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(561) 233-2400
FAX: (561) 233-2414
www.co.palm-beach.fl.us/erm

January 22, 2008

Ms. Marie Burns, Acting Chief
Planning Division (PD-EC)
US Army Corps of Engineers
PO Box 4970
Jacksonville, Florida 32202-4412

SUBJECT: PALM BEACH HARBOR EIS/FEASIBILITY STUDY

Dear Ms. Burns:

The Department of Environmental Resources Management (ERM) has conducted a preliminary review of the issues associated with the proposed expansion of Palm Beach Harbor and Lake Worth Inlet. While the Port has been working closely with Palm Beach County to improve the management of the inlet and Peanut Island, the proposed project will have major environmental impacts that need to be addressed in the Feasibility Study and Environmental Impact Statement. Palm Beach County has agreed to support this study to get a better understanding of project alternatives and their impacts.

PROPOSED WORK

The study will evaluate options for widening and deepening the Lake Worth Inlet and expanding Palm Beach Harbor to improve navigation safety, improve port efficiency and to accommodate larger ships. Potential expansion alternatives include no action, channel deepening, channel widening, addition of channel flares offshore, and expansion of the turning basin to the north and south as outlined on the enclosed map.

HABITAT ISSUES

- One of the primary concerns is that dredging will destroy valuable seagrass, hardbottom and softbottom resources. Depending on the extent of dredging proposed, the potential exists for negative impacts to offshore reefs and the artificial reefs within the channel flare footprint (Study Areas A1 and A2), hardbottom communities on the inlet channel walls (Study Area B), hardbottom and seagrass communities east of Peanut Island (Study Area C), and seagrass communities (Study Areas D, F and G). Additionally, substantial amounts of shallow, productive softbottom supporting a diverse invertebrate community may be eliminated in all study areas.
- Surveys of these habitats that have been performed by ERM are not sufficient to address potential impacts from the proposed work. Detailed resource surveys will need to be conducted to adequately characterize each study area.
- While some of the resources that will be affected have been created by man (artificial reefs, channel walls, hardbottom rubble), these communities have been established for decades. They have been colonized by hard corals, soft corals, and sponges, support recreationally and commercially species (including lobsters), and provide important environmental functions that need to be recognized in the study.
- The seagrass beds within the project limits are some of the most diverse in the county with at least 5 species documented to occur. These beds have additional

significance given the proximity to the manatee aggregation site at the Florida Power and Light (FPL) warm-water discharge.

- Mitigation for seagrass impacts at the scale being considered will have a poor chance of success in Lake Worth Lagoon. The most likely method to mitigate for any seagrass impacts would be to fill large portions of the Lake Worth Lagoon to raise the bottom to the photic zone. The only location near the inlet where mitigation at this scale could be constructed is located about 1 ½ miles south of the inlet. It is unlikely a sufficiently large mitigation project could be constructed here since it is expected to have additional significant impacts to nearby seagrasses, benthic invertebrates, navigation, and flushing of the lagoon. Further, based upon their limited distribution in the lagoon and their light and nutrient requirements, it is highly unlikely that manatee grass (*Syringodium filiforme*) or turtle grass (*Thalassia testudinum*) would grow at this location. For these reasons, every effort should be made to significantly reduce or eliminate seagrass impacts.
- The proposed dredging is in direct conflict with the Lake Worth Lagoon Management Plan which lists seagrass preservation as one of its priority objectives, and the Coastal Management Element (CME) of the Palm Beach County Comprehensive Land Use Plan, which has a goal of preserving and protecting coastal resources.
- Impacts to water quality and the potential for increased flushing in the Lake Worth Lagoon need to be evaluated. While it is likely that increased oceanic water in the lagoon will provide benefits from improved clarity, there will be changes in lagoon salinity that may affect a number of other species that need to be evaluated. It is recommended that predicted changes in salinity in the lagoon be evaluated using an existing model (Zarillo, 2003). Additionally, the potential for increased flushing of nutrient rich lagoon waters onto offshore reefs needs to be considered.

LISTED SPECIES ISSUES

- Manatees are the listed species most affected by this project which is located where the majority of manatees are found in the county. The FPL discharge provides an important warm-water refuge for hundreds of manatees in the winter. Alterations to the basin near the discharge are likely to affect manatees and will be one of the most challenging impacts to offset.
- Sea turtles utilize a number of habitats in the project area including the beaches, reefs, seagrass beds, and inlet jetties. Recent studies conducted by ERM have documented juvenile green turtles utilizing seagrass beds 1 ½ miles north of Palm Beach Inlet and they may be using the beds south of the inlet. Juvenile green and hawksbill turtles utilize nearshore reefs near the inlet. Juvenile green turtles have also been killed during maintenance dredging of the inlet indicating that they may be foraging on algae found on the rocks (similar to those observed in the Trident submarine basin in Port Canaveral and Brazos Santiago Pass in Texas). Four species of sea turtles (loggerhead, green, leatherback, and hawksbill) utilize the nesting beaches adjacent to the inlet and five species (loggerhead, green, leatherback, hawksbill, and Kemp's ridley) occur in the ocean near the inlet.
- Lighting at the Port is currently impacting sea turtles. High mast lighting that has been added during recent Port renovations that increased illumination in the coastal area, has been implicated in sea turtle hatchling disorientation incidents on Palm

Beach Shores, and probably contributes to many other disorientations in the area. Increased cargo traffic will likely mean increased coastal lighting impacts in the cargo handling area. Port lighting should be evaluated during the EIS process to determine methods for achieving sufficient illumination for port operations while minimizing the amount of light trespass off the property.

- Johnson's seagrass (*Halophila johnsonii*) is one of the most commonly occurring seagrasses in Lake Worth Lagoon. Impacts from dredging and sedimentation, as well as alterations to salinity and water clarity will impact this threatened species.
- Whales, including humpback and right whale, have infrequently been observed in the inlet and in adjacent waters.
- The Lake Worth Inlet is one of the most important areas for several species of the Atlantic population of snook (*Centropomus* spp), a species of special concern. Thousands of snook utilize the inlet and nearby structure during summer spawning aggregations and return to this location every year.
- Construction will have to be timed to minimize impacts in the winter to manatees and during the summer to nesting sea turtles and spawning snook. Another consideration in determining timing of construction is that offshore currents tend to be stronger in summer which would increase flushing, dilution and transportation of a turbidity plume.
- The public notice stated that blasting may not be necessary for this project. However, based upon our understanding of the geology, previous dredging at this inlet, and recent dredging in the Port of Miami, we expect that there will strong economic incentive to use blasting. Any consideration for blasting must take into account the impacts to listed species and fishes.

INLET AND BEACH MANAGEMENT ISSUES

- The Lake Worth Inlet is already the primary cause of erosion of downdrift beaches. Any widening and deepening of the inlet and the nearshore will alter the wave climate and littoral sand transport which could increase the loss of sand to the downdrift beaches. Any impacts will require an increase in the amount of sand bypassing and beach nourishment (which can have negative impacts) to compensate. The costs to mitigate for downdrift beach impacts must be clearly and fully defined.
- All beach compatible sand must be placed on the beach. There may be options for disposing of non-beach compatible material in existing dredge holes in Lake Worth Lagoon. Use of the offshore spoil disposal area should be only as a last resort since there are important deep reef habitats downstream from the disposal area. Geotechnical work should be performed as part of this study to adequately characterize the sediments and determine the quantities that will be available for disposal at the different sites.

PORT OPERATIONS

- Expansion of the inlet and turning basin to accommodate larger ships will have secondary impacts that should be addressed in the EIS.
- Concerns have been raised recently about potential damage associated with the existing anchorage area and a study has been initiated to evaluate options for

revising the anchorage area. This issue should be addressed in the EIS since the ships that would be using the anchorage are usually associated with the Port.

- ERM currently uses the lot west of Study Area G as the artificial reef construction staging area. In the event the Port acquires this site for expansion. ERM would like to receive assurances that there will be provisions for such a staging area in future Port plans.

RECREATION ISSUES

- NEPA requires that impacts to recreation be evaluated. The inlet vicinity is heavily used by boaters, fisherman, snorkelers, divers, surfers, and the general public.
- Safety issues will need to be evaluated since larger ships operating close to a popular park (Peanut Island), amidst large numbers of recreational and commercial small craft, and near popular dive sites is likely to increase the chance of accidents.
- Dredging of the channel flare (Study Area A) will affect wave generation that may alter local surf conditions. Given the quality and popularity of the Reef Road and Pump House surf breaks, it is recommended that potential changes to the surf be evaluated.
- Erosion of the southeast corner of Peanut Island has necessitated increasing amounts of armoring to protect recreational amenities. Dredging the channel deeper and closer to the island will allow for increased wave and current energy to alter the shoreline and threaten additional amenities. Those impacts and costs should be evaluated.

BENEFIT/COST

- A key determinant of feasibility is the benefit/cost ratio of each alternative. It is requested that, in addition to construction costs, the true costs to all the resources be included in the analysis. This would include costs for mitigation, monitoring, increased beach and inlet management, and loss of recreation resources.

In summary, a thorough study is necessary to adequately evaluate alternatives. Given the extent of potential impacts, it does not appear that it is possible to construct all components of the project without significant environmental effect. The challenge will be to develop a plan that meets some of the Port's goals while minimizing impacts.

Thank you for the opportunity to provide comments. Please call me at 561-233-2400 or Mr. Paul Davis at 561-233-2509 if you have any questions.

Sincerely,

Richard E. Walesky, Director
Environmental Resources Management

REW:PD:dab

Enclosure

c: (w/ enclosure):
Robert Weisman, County Administrator
Members of the PBC Artificial Reef and Environmental Enhancement Committee
Lori Baer, Director, Port of Palm Beach
Peter Elwell, Town Manager, Town of Palm Beach
Cynthia Lindscoog, Town Administrator, Town of Palm Beach Shores
William Wilkins, City Manager, Riviera Beach
Edward Mitchell, City Administrator, West Palm Beach
Dennis Eshleman, Director, PBC Parks and Recreation
David Roach, Executive Director, FIND

LEGEND

Federal Harbor Project
Potential Improvement Areas

Note: Improvement areas are general study areas only; extensive analysis is required prior to refinement and selection of any expansion alternative.

A-1 - South Channel Flare
A-2 - North Channel Flare
B - Widener inside jetties
C - Widener
D - Peanut Island Widener
E - North Basin Widener
F - Turning Basin Eastern Widener
G - Turning Basin Southern Expansion
1- Channel Marker Number

Palm Beach Harbor/Lake Worth Inlet
Navigation Feasibility Study
Study Areas for Potential Improvements
Port of Palm Beach District

Source: Google Earth; The Four Gates Company, 2007

CITY OF RIVIERA BEACH

OFFICE OF
COMMUNITY DEVELOPMENT

DEPARTMENT OF COMMUNITY DEVELOPMENT
600 WEST BLUE HERON BLVD. • RIVIERA BEACH, FLORIDA 33404
(561) 845-4060 FAX: (561) 845-4038

June 5, 2013

Ms. Angela Dunn
U.S. Army Corps of Engineers
Planning Division, Environmental Branch
P.O. Box 4970
Jacksonville, Florida 32232-0019

Re: Draft Integrated Feasibility Report and Environmental Impact Statement for Lake Worth Inlet, Palm Beach Harbor Deepening and Widening

Dear Ms. Dunn:

The City of Riviera Beach has reviewed the Draft Integrated Feasibility Report and Environmental Impact Statement for Lake Worth Inlet, Palm Beach Harbor Deepening and Widening and offers the following comments.

The City requests that the project be in compliance with the goals of the City of Riviera Beach's Comprehensive Plan, particularly the Conservation and Costal Management Elements. These elements require the preservation of fisheries habitat, protection of seagrasses, protection of wildlife and to maintain wildlife habitat for species such as sea turtles and manatees.

The City would like to be involved and notified in the selection and placement of potential mitigation sites and the possibility to request mitigation sites within its jurisdiction.

Should you have any questions or comments, please do not hesitate to contact me at phone number 561-845-4060 or email me at mmckinney@rivierabch.com.

Sincerely,

Mary McKinney, AICP
Director of Community Development

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING
3900 COMMONWEALTH BOULEVARD
TALLAHASSEE, FLORIDA 32399-3000

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

June 14, 2013

Ms. Angela E. Dunn, Biologist
Planning & Policy Division, Jacksonville District
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

RE: Department of the Army, Jacksonville District Corps of Engineers – Draft Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for Lake Worth Inlet, Palm Beach Harbor – Palm Beach County, Florida.
SAI # FL201304166574C

Dear Ms. Dunn:

The Florida State Clearinghouse has coordinated a review of the U.S. Army Corps of Engineers' (USACE) Draft IFR/EIS for Lake Worth Inlet, Palm Beach Harbor under the following authorities: Presidential Executive Order 12372; § 403.061(42), *Florida Statutes*; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

The following agencies submitted comments, concerns and recommendations regarding the Draft IFR/EIS, all of which (letters, memoranda or Clearinghouse database entries) are attached hereto, incorporated herein by this reference, and made an integral part of this letter:

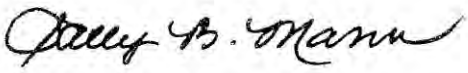
- Florida Department of Environmental Protection
- Florida Fish and Wildlife Conservation Commission
- Florida Department of Transportation
- South Florida Water Management District
- Treasure Coast Regional Planning Council
- The Village of North Palm Beach

Based on the information contained in the submittal and enclosed agency comments, the state has determined that the USACE's Draft IFR/EIS for Lake Worth Inlet, Palm Beach Harbor is consistent with the Florida Coastal Management Program (FCMP). To ensure the project's continued consistency with the FCMP, the concerns identified by the reviewing agencies must be addressed prior to project implementation. The state's continued concurrence will be based on the activities' compliance with FCMP authorities, including federal and state monitoring of the

activities to ensure their continued conformance, and the adequate resolution of issues identified during this and subsequent regulatory reviews. The state's final concurrence of the project's consistency with the FCMP will be determined during the state's environmental permitting process, in accordance with Section 373.428, *Florida Statutes*.

Please refer to the attached letters, memoranda and online Clearinghouse database entries for all agency comments, concerns and recommendations regarding the above-captioned project. Should you have any questions or require additional information, please contact Ms. Lauren Milligan, Clearinghouse Coordinator, at (850) 245-2170 or Lauren.Milligan@dep.state.fl.us.

Yours sincerely,



Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/lm
Enclosures

cc: Roxane Dow, DEP, BMERPSP
Scott Sanders, FWC
Martin Markovich, FDOT
John Morgan, SFWMD
Stephanie Heidt, TCRPC

Project Information	
Project:	FL201304166574C
Comments Due:	05/28/2013
Letter Due:	06/15/2013
Description:	DEPARTMENT OF THE ARMY, JACKSONVILLE DISTRICT CORPS OF ENGINEERS - DRAFT INTEGRATED FEASIBILITY REPORT/ENVIRONMENTAL IMPACT STATEMENT FOR LAKE WORTH INLET, PALM BEACH HARBOR - PALM BEACH COUNTY, FLORIDA.
Keywords:	ACOE - DIFR/EIS, LAKE WORTH INLET, PALM BEACH HARBOR - PALM BEACH CO.
CFDA #:	12.107

Agency Comments:

FISH and WILDLIFE COMMISSION - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

FWC staff continues to encourage the USACE to consider state-listed species in the project area, including mitigation areas and nearshore spoil placement areas, which may be suitable for shorebirds and the Florida mouse. Staff has provided a number of comments regarding the effects of: beach and nearshore sand placement on nesting marine turtles, harbor deepening on warm-water refugia and foraging habitat for manatees, shipping traffic changes on manatee/vessel interactions, channel bedrock blasting on manatees, construction activities on Florida snook, and direct impacts to corals, hardbottom and seagrass beds.

TRANSPORTATION - FLORIDA DEPARTMENT OF TRANSPORTATION

FDOT District 4 staff advises that, should the need for lane closures or traffic channeling on the state roadway system arise, Maintenance of Traffic Plans may be necessary and coordination with the FDOT District 4 Traffic Operations office will be required. If any hazardous materials will need to be transported on FDOT roads, a hazardous spills response plan will need to be prepared and coordination with the FDOT District 4 Maintenance Permits office will also be required. Please contact Ms. Christine Bacomo, P.E., of the FDOT District 4 Permits Office at (954) 777-4377 for further information and assistance with the FDOT's requirements.

TREASURE COAST RPC - TREASURE COAST REGIONAL PLANNING COUNCIL

The proposal is consistent with the Strategic Regional Policy Plan, provided there is proper mitigation for impacts to seagrass and other sensitive benthic communities, and proper precautions are taken to avoid impacts to manatees, sea turtles, and other marine and estuarine resources in Lake Worth Lagoon. The proposed project will further Regional Goal 3.1, which calls for an improved economy for the Region's distressed communities; and Regional Goal 3.5, improved transportation and education linkages throughout the Region. Please also see the enclosed correspondence received from the Village of North Palm Beach.

PALM BEACH -

The Village of North Palm Beach has advised the Treasure Coast Regional Planning Council that the Village objects to the USACE's proposed use of the Turtle Cove portion of Lake Worth Lagoon for seagrass mitigation activities. Village staff report that Palm Beach County applied for a permit from the USACE to cap 42 acres of muck sediment within Turtle Cove in an effort to create 37.8 acres of seagrass habitat. A large portion of this area is located within the Village's boundaries and adjacent to its existing Old Port Cove and Twelve Oaks communities, and the proposed Water Club multi-family development. In response to strenuous objections from the Village and other stakeholders, the County withdrew its permit application. The Village details its concerns regarding the potential adverse effects of fill placement on tidal flow, water quality, sea life, navigation and adjacent property owners in the enclosed letter.

ENVIRONMENTAL PROTECTION - FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
The DEP Division of Water Resource Management's Engineering, Hydrology and Geology Program and Beaches, Inlets and Ports Program staffs have provided a number of comments on the Draft IFR/EIS for USACE consideration. Please see the enclosed memorandum for further details.
STATE - FLORIDA DEPARTMENT OF STATE
No Comment/Consistent
SOUTH FLORIDA WMD - SOUTH FLORIDA WATER MANAGEMENT DISTRICT
South Florida Water Management District (SFWMD) staff has reviewed the Lake Worth Inlet Draft Feasibility Report/EIS and offers the following comments: 1. The impacts to water quality in the Lagoon presented in the report appear to be based on speculation with no supporting evidence from either observations from similar projects or numerical modeling observations. As such, the assessment of possible impacts on water quality does not appear to be scientifically defensible. 2. The Inlet is a very active area for fishes, young sea turtles, manatees, other marine mammals, and invertebrates. The Inlet is also a haven for fishes, particularly in the spring when protected species such as snook congregate there for spawning. Shrimp also spawn in this area. The proposed single dedicated observer above the water and a person to walk the beaches does not seem adequate to monitor impacts to aquatic organisms particularly during construction activities. The use of explosives will require significantly more monitoring above and below the water. 3. Manatees are present in the area year round and utilize the seagrass beds for feeding. From the reference maps, it appears the dredging activities will remove most of the existing seagrass beds in the area. Manatees will have to travel further and more frequently to feed, which makes them more susceptible to injuries from boat traffic. 4. The main criteria for mitigating impacts to seagrass beds and hard bottom habitats are the availability of light and water clarity. If water clarity and light are not adequate the seagrasses will not grow and invertebrates will not settle onto the hard bottom substrate. The seagrasses and hard bottom habitats that will be lost due to proposed dredging activities have excellent water clarity and light due to inlet flushing. The proposed mitigation sites are scattered throughout the Lagoon and exhibit much lower levels of sunlight and water clarity.

For more information or to submit comments, please contact the Clearinghouse Office at:

3900 COMMONWEALTH BOULEVARD, M.S. 47
TALLAHASSEE, FLORIDA 32399-3000
TELEPHONE: (850) 245-2161
FAX: (850) 245-2190

Visit the Clearinghouse Home Page to query other projects.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

MARJORY STONEMAN DOUGLAS BUILDING
3900 COMMONWEALTH BOULEVARD
TALLAHASSEE, FLORIDA 32399-3000

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

MEMORANDUM

TO: Lauren P. Milligan, Office of Intergovernmental Programs

FROM: Lainie Edwards, Beaches, Mining and ERP Support Program

SUBJECT: U.S. Army Corps of Engineers, Jacksonville District – Draft Integrated Feasibility Report/Environmental Impact Statement (IFR/EIS) for Lake Worth Inlet, Palm Beach Harbor – Palm Beach County, Florida.
SAI # FL13-6574C

DATE: June 11, 2013

The Division of Water Resource Management's Engineering, Hydrology and Geology Program staff has reviewed the draft IFR/EIS and offers the following comments:

1) The plates (*e.g.*, Plate 19), tables and maps in the draft IFR/EIS appendices depict a "Proposed Expanded Beach Disposal Area" and "Extension of the Beach Disposal Template" of approximately 2,000 feet located between FDEP range monuments R-79 to R-81, south of the inlet. The Department considers this proposed beach disposal area to be consistent with, and indeed, required by public policy relating to improved navigation inlets as provided in Section 161.142, Florida Statutes (F.S.). However, the text of the main document does not further describe the proposed disposal area or potential impacts to nearshore hardbottom located in the vicinity of the disposal area. In order for the Department to determine consistency, please provide this information in the final EIS.

2) Draft Appendix A – Engineering provides hydrology and hydraulics modeling results and recommendations on limitation on depth and western extent of settling basin due to north jetty foundation failure from basin encroachment. The proposed improvements include a "notch" on the western side of the existing settling basin. However, the draft report provides no mention of increased wave energy transmission and the potential for increased or more frequent damage to the existing Sand Transfer Plant located on the north jetty. In order for the Department to determine consistency with Section 161.041, F.S., regarding effects to existing coastal structures, please provide this information in the engineering appendix of the final EIS.

3) Draft Appendix A – Engineering provides information on sediment transport and future dredging volume and frequency from the expanded impoundment basin that includes the proposed "notch." However, the engineering analysis does not include information on the effect to the bypassing volumes provided by the existing Sand Transfer Plant, which

is an integral part of sediment bypassing at this inlet. Also, in this regard, a sand placement protocol should be provided that optimizes placement location relative to beach conditions at the time of maintenance dredging. In order for the Department to determine consistency with public policy relating to improved navigation inlets, as provided in Section 161.142, F.S., please provide this information in the engineering appendix of the final EIS.

Please contact Mr. Robert Brantly at (850) 413-7803 or Robert.Brantly@dep.state.fl.us for additional assistance.

Beaches, Inlets and Ports Program staff also provides the following comments:

1) How will secondary impacts to seagrass adjacent to the project area be avoided during construction of the project and filling in the existing borrow area for seagrass mitigation?

2) Monitoring plans for both the seagrass and hardbottom mitigation will be required.

3) Additional details will be needed regarding the proposed seagrass mitigation project in the existing borrow area. A resource survey of conditions in and adjacent to the borrow area will be needed to determine if the mitigation is appropriate.

4) The Department will conduct an UMAM (Uniform Mitigation Assessment Method) review to determine the amount of mitigation needed to offset both seagrass and hardbottom impacts.

For further information, please contact Ms. Kristina Evans at (850) 413-7765 or Kristina.Evans@dep.state.fl.us.

Florida Fish and Wildlife Conservation Commission

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Managing fish and wildlife resources for their long-term well-being and the benefit of people.

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June 3, 2013

Ms. Lauren P. Milligan
Department of Environmental Protection
Florida State Clearinghouse
3900 Commonwealth Boulevard, M.S. 47
Tallahassee, FL 32399-3000
Lauren.Milligan@dep.state.fl.us

RE: Draft Integrated Feasibility Report and Environmental Impact Statement, Lake Worth Inlet, Palm Beach Harbor SAI # FL201304166574C

Dear Ms. Milligan:

The Florida Fish and Wildlife Conservation Commission (FWC) has coordinated our agency's review of the Draft Integrated Feasibility Report and Environmental Impact Statement for the expansion of the Lake Worth Inlet, Palm Beach Harbor in Palm Beach County. We are providing the following input under the National Environmental Policy Act, the Fish and Wildlife Coordination Act, and the Coastal Zone Management Act/Florida Coastal Management Program (CZMA/FCMP).

Project Description and Location

The U.S. Army Corps of Engineers (USACE) has submitted a Draft Integrated Feasibility Report and an Environmental Impact Statement (EIS) for the expansion of Lake Worth Inlet (Palm Beach Harbor). The EIS states that the tentatively selected plan proposes the following:

> Deepen the entrance channel from 35 feet to 41 feet and widen from 400 feet to between 440-460 feet plus a southern approach flare; deepen the inner channel from 33 feet to 39 feet and widen from 300 feet to 450 feet; deepen the main turning basin from 33 feet to 39 feet and extend the southern boundary of the turning basin an additional 150 feet. Suitable material would be placed in the nearshore or beneficially used for proposed mitigation; unsuitable material would be taken to the Palm Beach Ocean Dredged Material Disposal Site. Approximately 4.5 acres of seagrass habitat and 4.9 acres of hardbottom habitat would be affected through implementation of the tentatively selected plan.

Methodology may include blasting, since there is hard rock in this location. It is anticipated that most blasting will occur in the Turning Basin rather than the entrance channel. The Port of Palm Beach District is the cooperating agency and non-federal sponsor for this project and will provide information and assistance on the resource assessment and mitigation measures and alternatives.

Comments and Recommendations

FWC comments discussed below are provided to the USACE in order to facilitate our continuing review and coordination with this project, since it will also be going through the permitting process. FWC continues to encourage the USACE to consider state-listed species in the project area, including mitigation areas and nearshore spoil placement areas which may be suitable for shorebirds and the Florida mouse.

Marine Turtles:

Section 4.8 Dredged Material Placement, Nearshore Placement Area: Sand is proposed to be placed below the mean high water. It is important that the landward limit of sand placement be defined as mean low water, to avoid creating a subaerial berm that might become part of the

beach itself during fill placement. The methods for nearshore placement need to be more clearly defined. If possible, stockpiling of sand on the beach and then pushing sand into the water using heavy equipment should be avoided as this creates the same risk of take to nesting marine turtles as beach placement. Piping sand into the nearshore so that it accumulates at or below mean low water should minimize the potential for negative impacts to marine turtles and their nests. Sand should be distributed along the nearshore such that placed material does not create a barrier between open water and the nesting beach.

Chapter 4.0 Tentatively Selected Plan: The dredge selected should be required to provide a light management plan that clearly specifies the types of lights on the dredge, the purpose for the lighting, and appropriate shielding. The plan should be submitted for review and approval by state agency staff to ensure that human safety, manatee, sea turtle protection and navigational requirements are met during all dredging activity.

Florida manatee:

In Chapter 5.5.2 of the EIS (p.121), it is stated that deepening and widening the channels in Lake Worth Inlet is not expected to result in any change of use by manatees, and that no changes are expected regarding manatee/vessel interactions within the harbor as a direct result of the expansion project. In our comments in the draft EIS, we expressed concern that deepening the bathymetry adjacent to the warm water refuge could result in reduction of warm-water habitat due to an increase of the mixing between the cooler water from the expanded turning basin with the thermal outfall of the power plant. Please provide information that shows why this is not a concern. Since seagrass resources that provide forage for manatees adjacent to the warm water habitat may be reduced as a result of this project, please provide information that shows why this change is not expected to result in a change of use by manatees. Lastly, changes in shipping traffic may also increase the risk to manatees due to its proximity to the warm-water refuge and to the travel corridors used to access foraging areas located north of the port. Please provide more specific information that supports the conclusion that no changes are expected regarding manatee/vessel interactions within the harbor, such as changes in traffic levels and patterns and vessel types and sizes.

In Chapter 5.5.13 of the EIS (p.134), the environmental commitments state that the "standard protective measures for manatees shall be required" during construction activities. It is unclear what specific conservation measures the USACE is referring to when referencing "standard protective measures". Parts of the EIS and attachments discuss the vetted "Standard Manatee Construction Conditions for In-Water Work", but also include specific conservation measures for clamshell dredging and blasting activities. FWC suggests that clearly understood conservation measures be outlined as the USACE continues to develop their monitoring and protective measures for endangered, threatened, and protected species. Examples are as follows:

Various versions of the "Standard Manatee Construction Conditions for In-Water Work" are used throughout the EIS and Appendices, some of which are outdated. Be aware that the discontinued 800 number is still being referenced for the hotline, and that the contact information for other agencies are incorrect.

In Appendix E, Biological Assessment for the USFWS (p. 140), the USACE states that blasting will not occur between November 15 and March 15, however, other dredging and construction activities may take place inside the Port during this period of time. FWC recommends that the window match the current season as marked by speed zones (November 15 to March 31), and that dredging in the Turning Basin not occur during that same time period. If the material in the Turning Basin is beach compatible and is expected to be placed nearshore, FWC would like to work with the USACE to determine how close dredging should come to the warm-water refuge in

the winter time at the Florida Power & Light Riviera Beach power plant discharge located immediately south of the port.

Blasting

The Biological Assessment (BA) to NMFS and the Biological Assessment to USFWS have differing formulas for determining a blast radius exclusion zone. While the NMFS BA does not take into account manatees, what is proposed as a mitigative measure for blasting in this project should be clear and consistent.

The NMFS BA also references an "FFWCC Endangered Species Watch Manual", and states that the formula for determining a blast radius exclusion zone for uncontrolled blasts suspended in the water column is the same as the U.S. Navy Dive Manual. FWC has had a variety of drafts to provide guidelines during blasting projects, however none of these drafts have been finalized or made into a manual. The calculation for determining a blast radius has evolved over the years, and FWC acknowledges that confined blasting poses less risk than open water blasts. However, FWC contends that the formula in the Navy Dive Manual provides inadequate protection for protected marine species during open water blasts.

The Appendices also mention that the blasting protocols from the Miami Harbor Phase II blasting will likely be followed. FWC recommends that the revised and improved language for observers for the Miami Harbor Phase III blasting be followed, due to the importance of this area and potential difficulty in water visibility. The observer discussion in these documents do not address observer qualifications, which are a critical part of a successful monitoring plan.

The test blast discussions state that the weight of the charges will progressively increase up to what will be the maximum needed for production. However, the conservation measures are drastically different than the proposed monitoring for the project, and do not include aerial surveys. FWC recommends that a radius be calculated for test blasts and a watch program be implemented as needed, since the potential adverse impacts from tests blasts would be the same as production blasts.

Please clarify whether or not the rock at Lake Worth is expected to be harder or softer than the rock at the Port of Miami. Discussions on page 21 of 34 of the USFWS BA has conflicting statements.

Conservation measures also include a minimum of 8 ms between delay detonations to stagger the blast pressures. Be aware that FWC typically recommends greater than 8 ms in our guidance, based on recommendations from Dr. Tom Keevin.

Snook:

The Florida snook is one of the mostly highly prized, exclusively recreational marine species in southeast Florida. The spawning season for snook in Lake Worth Inlet is May through September (Barbieri 2003), and studies have shown that spawning snook can be impacted by stress (Milla et al 2009). The FWC requests that the USACE work with the FWC to identify construction methodologies to minimize potential impacts to spawning snook in Lake Worth Inlet.

Corals and Hardbottom:

Palm Beach County has produced a recent Lake Worth Lagoon Artificial Reef report regarding corals in the Peanut Island snorkel lagoon (*Palm Beach Co. Dept. Environmental Resources Management. 2013. Lake Worth Lagoon's Artificial Reefs. Unpubl. Mss. 21 pp.*). This snorkel lagoon is just inside the inlet, and it is reasonable to assume that if there is recent coral diversity

in that lagoon, there could be greater diversity than just *Siderastrea* spp. on the limestone edges of the entrance channel. The paragraph below is a discussion from this report:

> Benthic invertebrates were recorded during the site visits. During the 2007 site visit, only 2 years after the limerock boulders were installed, 5 scleractinian corals were observed: diffuse ivory bush (*Oculina diffusa*), rose coral (*Mancinia aerolata*), tube coral (*Cladocera arbuscula*), massive starlet (*Siderastrea siderea*), and lesser starlet (*S. radians*) corals. A gorgonian, angular sea whip (*Pterogorgia anceps*), was present. ... During the May 2008 visit, 2 additional corals were observed: smooth star (*Solenastrea bournoni*) and symmetrical brain (*Diploria strigosa*) corals. The site visit in September 2012 documented 12, possibly 13, different species of corals. In addition to the above, mustard hill (*Porites asteroides*), boulder brain (*Colpophyllia natans*), grooved brain (*Diploria labyrinthiformis*), elliptical (*Dichocoenia stokesii*), blushing star (*Stephanocoenia intersepts*), and great star (*Montastraea cavernosa*), and possibly knobby star (*Solenastrea hyades*) corals were recorded. Several of these corals have attained large sizes, such as 30 cm for *C. natans*, 20 cm for *D. strigosa*, and 10 cm for *S. bournoni*.

FWC recommends that the USACE do another survey to assess the presence of coral species in the project area. The hardbottom habitat that will be impacted on the channel walls is very unique as it supports fish that reside inshore as well as offshore fish. FWC would like to continue to review and comment on the mitigation plans as they are revised and finalized.

Seagrass:

There are ecological differences in seagrass beds near the inlet as compared to seagrass beds a distance away from the inlet. The following paragraph is an excerpt out of the publication, *Environmental and Biogeographical Factors Influencing Ichthyofaunal Diversity: Indian River Lagoon* (RG Gilmore. 1995. Bull Mar Sci 57(1):153-170):

> Seagrass meadows near ocean inlets offer optimum physical conditions with low variation in temperature/salinity and other physical parameters as well as proximity to ocean spawning sites for reef and neritic species. Therefore, these seagrass meadows provide habitat for the most speciose fish communities within the lagoon with at least 214 species. A faunal transition and fish community change takes place within 5km of the ocean inlet to the IRL as one proceeds away from the inlet. Seagrass fish communities away from the inlets become less speciose even though fish densities remain stable or increase, and seagrass bed size and species are the same or increase.

While this reference is based on work done in the Indian River Lagoon, the habitat comparisons are comparable to the Lake Worth Lagoon. The USACE criteria for choosing mitigation locations include cost effectiveness, tidal flow, and acreage, and does not include ecological functions (such as nursery habitat for juvenile fish, species diversity, species abundance). FWC suggests that the USACE focus on including location (within 5 km or less from the inlet) as a criterion.

Habitat Mitigation Options:

Please provide information that would explain how ecological functions of hardbottom in the following areas would compare to ecological functions of hardbottom in impact areas: Kelsey Park, Sugar Sands, Singer Island, Rybovich artificial reef, and Little Lake Worth. For example, the proposed dredge hole for Little Lake Worth is five miles north of the inlet and has less exchange than areas within the main portion of the Lake Worth Lagoon (LWL). There is only a narrow channel that connects LWL and Little Lake Worth Lagoon. Seagrass potential in this area

may be limited. Surveys conducted by Palm Beach County in 1990 and FWC in 1999 found no seagrass resources in Little Lake Worth Lagoon.

Turtle Cove: Palm Beach County Environmental Resource Management submitted a permit application to fill this dredge hole in the past but was met with opposition from the fishing community as this hole is considered a valuable fishing location. How would an artificial reef at this distance from the inlet compare to the habitat in the impact area?

Singer Island Acquisition: Is acquisition of these privately held submerged lands with existing seagrass beds proposed as mitigation?

Peanut Island Shoal: FWC believes this would be very high risk as the shoal would potentially return (as indicated in Appendix D) and thus the seagrasses would be temporary. This does not seem to be a reasonable mitigation location. Additionally, the shoal itself serves as forage area for shorebirds.

Peanut Island breakwaters: FWC believes this project is already completed.
Ibis Isle: FWC believes the Ibis Isle project is already completed (is the USACE referring to Ibis Isle West, which is nine miles away?).

Conclusion

We find this project consistent with our authorities under Florida's Coastal Zone Management Program. As additional project information is developed or becomes available, the FWC may have additional comments regarding appropriate conservation measures. Because details and adequate offsetting measures are still forthcoming, FWC's final recommendations and CZMA consistency determination will be provided during the environmental permitting process. However, if the applicant incorporates the above recommendations, it would facilitate our review of the project and accelerate the future permitting process. If your staff has any specific questions regarding our comments in this letter, I encourage them to contact Kristen Nelson Sella at (850) 922-4330 or Kristen.Sella@myfwc.com.

Sincerely,

Carol A. Knox, Acting Section Leader
Imperiled Species Management Section

/kns
ENV 1-3-2

cc: USFWS, Vero Beach
NMFS, Miami

TREASURE COAST REGIONAL PLANNING COUNCIL
INTERGOVERNMENTAL COORDINATION AND REVIEW LOG

TCRPC Number: 13-PB-04-02 SAI# FL201304166574C

Applicant: U.S. Army Corp of Engineers – Jacksonville District

Project Description: Draft Integrated Feasibility Report/ Environmental Impact Statement (EIS) for Lake Worth Inlet, Palm Beach Harbor

The U.S. Army Corps of Engineers (Corps), Jacksonville District, in partnership with the Port of Palm Beach; and in coordination with U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the Florida Department of Environmental Protection as well as other Federal, state, and local agencies, and federally recognized Tribes is circulating for public review the above-referenced draft report.

The Port of Palm Beach, located in Riviera Beach, Florida, is the fourth busiest container port in Florida and the eighteenth busiest in the continental United States. The Lake Worth Inlet serves as the entrance channel to the port. Based on modern vessel sizes, the port is operating with insufficient channel width and depth. These deficiencies cause the local harbor pilots and the U.S. Coast Guard to place restrictions on vessel transit to ensure safety. This is negatively impacting future port potential with the current fleet of vessels.

The draft report presents a tentatively selected plan that proposes to:

- deepen the entrance channel from 35 feet to 41 feet and widen from 400 feet to between 440-460 feet plus a southern approach flare;
- deepen the inner channel from 33 feet to 39 feet and widen from 300 feet to 450 feet;
- deepen the main turning basin from 33 feet to 39 feet and extend the southern boundary of the turning basin an additional 150 feet.

Suitable material would be placed in the near shore or beneficially used for proposed mitigation, and unsuitable material would be taken to the Palm Beach Ocean Dredged Material Disposal Site.

Environmental impacts associated with the tentatively selected plan to widen the channel and turning basin will result in direct removal of approximately 4.5 acres of seagrass communities and 4.9 acres of hard bottom benthic communities. Furthermore, the proposed project will have direct impacts to Johnson's seagrass, a threatened species.

The EIS includes a detailed mitigation plan to compensate for the loss of seagrass and hard bottom communities. The Corps is coordinating with the Florida Department of Environmental Protection and the Palm Beach County Department of Environmental Resource Management in selecting suitable options to replace the functions and values of seagrass and hard bottom communities in the Lake Worth Lagoon. The options include dredged hole capping and filling, creation of artificial hard bottom, and acquisition and conservation of submerged lands in need of protection. Furthermore, the Corps is also coordinating with the Florida Fish and Wildlife Conservation Commission and U.S. Fish and Wildlife Service to avoid and minimize potential impacts to endangered and threatened species, including the West Indian Manatee, sea turtles, and other marine organisms.

Funding Agency: N/A

Estimated Funding: For the purpose of cost sharing and authorization, the total estimated project first cost is $94,600,000 with an estimated Federal share of $61,500,000 and an estimated non-Federal share of $33,100,000.

Recommendations: The proposal is consistent with the **Strategic Regional Policy Plan,** provided there is proper mitigation for impacts to seagrass and other sensitive benthic communities, and proper precautions are taken to avoid impacts to manatees, sea turtles, and other marine and estuarine resources in Lake Worth Lagoon. The proposed project will further **Regional Goal 3.1,** which calls for an improved economy for the Region's distressed communities; and **Regional Goal 3.5,** improved transportation and education linkages throughout the Region.

Agencies Contacted: All Palm Beach County Local Governments
Palm Beach Metropolitan Planning Organization
Palm Beach County Environmental Resources Management Department

BUILT ENVIRONMENT

FEDERAL CHANNEL

- Inner Channel: Deepen (from 33' to 39'); Widen (from 300' to 450' minimum)
- Entrance Channel: Deepen (from 35' to 41'); Widen (from 400' to between 440' and 460'); plus south approach flare
- North Turning Basin: same
- Main Turning Basin: Depth: Deepen (from 33' to 39'); Width: 150' extension to the south & removal of notch on north side
- North and South Jetties: North Jetty will need sheetpile stabilization primarily because of the revised maintenance plan
- O&M: refer to advance maintenance discussion below

PLACEMENT OPTIONS

- Suitable material to be placed in the nearshore
- Non-beach compatible material will be placed at the Palm Beach Ocean Dredged Material Disposal Site (ODMDS) 4.5 miles offshore – in compliance with ocean disposal criteria; study will increase allowable disposal to > 500,000 cy per event
- Refer to Natural Environment discussion regarding Turtle Cove Dredged Hole Site and Singer Island Artificial Reef Mitigation Sites
- Peanut Island not a viable option due to limited capacity

PORT FACILITIES

- Port will modify bulkhead and deepen Slip 3 to depth (39') minimum

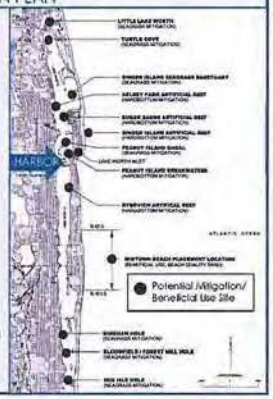
NATURAL ENVIRONMENT AND MITIGATION PLAN

MITIGATION REQUIRED

- Under negotiation: 8.25 to 11.25 acres of seagrass mitigation and 4.9 to 9.8 acres of hardbottom mitigation
- Proposed seagrass mitigation will fill dredged hole(s) to surrounding elevation using dredged material to allow restoration of seagrass
- Proposed hardbottom mitigation will place rock in artificial reef sites to allow establishment of species

(Refer to Chapter 5.0 for a full comparison of the Tentatively Selected Plan to the Future-Without Plan/No Action Condition)

Major Affected Environmental Resources: Manatee & Seagrass



NAVIGATION ENVIRONMENT

- Improved maneuverability/safety for large vessels (tankers, bulkers and cruise ships)
- Improved access into inlet when considering currents and wind
- Less dependence on tide windows (for underkeel) during transit

DESIGN VESSEL:
55,000 DWT Bulker 705' LOA
106' Beam 41.5' Design Draft

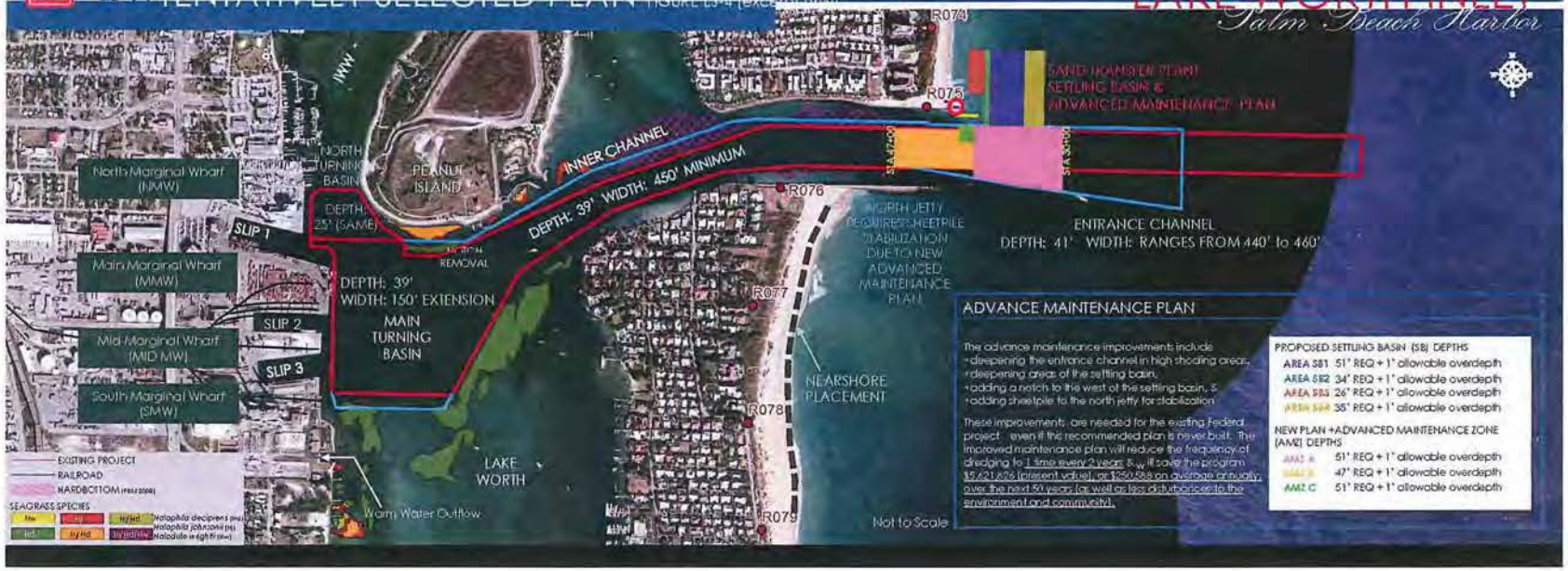
ECONOMIC ENVIRONMENT

- Benefiting Vessels: Tankers, Bulkers
- Allows for larger vessel capacity:
  - More loads per vessel and more efficient vessels
  - Fewer vessels calling
- Less vessel operating costs = cost savings to economy

PROJECT	39' DEPTH +WIDENING
Sum of Present-Value Benefits	$ 158,380,000
Total Costs (with Interest During Construction)	$ 96,000,000
Annualized Transportation Cost Savings (Benefits)	$ 7,060,000
Annualized Advanced Maintenance Cost Savings (Benefits)	$ 250,000
Total Benefits	$ 7,310,000
Annualized Costs	$ 4,280,000
Net NED Benefits	$ 3,030,000
BCR	1.71

Note: The costs and benefits in the table reflect a more refined analysis focused on the TSP.

4.0 TENTATIVELY SELECTED PLAN FIGURE 4.3-4 (Excerpt only)



ADVANCE MAINTENANCE PLAN

The advance maintenance improvements include
- deepening the entrance channel in high shoaling areas,
- deepening areas of the settling basin,
- adding a notch to the west of the settling basin, &
- adding sheetpile to the north jetty for stabilization

These improvements are needed for the existing Federal project even if the recommended plan is never built. The improved maintenance plan will reduce the frequency of dredging to 1 time every 2 years & will save the program $5,621,676 (present value), or $250,584 in average annually, over the next 50 years (as well as less disturbance to the environment and community).

PROPOSED SETTLING BASIN (SB) DEPTHS
- AREA SB1 51' REQ + 1' allowable overdepth
- AREA SB2 34' REQ + 1' allowable overdepth
- AREA SB3 26' REQ + 1' allowable overdepth
- AREA SB4 35' REQ + 1' allowable overdepth

NEW PLAN +ADVANCED MAINTENANCE ZONE (AMZ) DEPTHS
- AMZ A 51' REQ + 1' allowable overdepth
- AMZ B 47' REQ + 1' allowable overdepth
- AMZ C 51' REQ + 1' allowable overdepth

THE VILLAGE OF
North Palm Beach
501 U.S. HIGHWAY 1 • NORTH PALM BEACH, FLORIDA 33408 • 561-841-3355 • FAX 561-881-7469

May 15, 2013

Michael J. Busha, Executive Director
Treasure Coast Regional Planning Council
421 SW Camden Avenue
Stuart, Florida 34994

Re: Item 13-PB-0402 (Draft Integrated Feasibility Report/Environmental Impact Statement (EIS) for Lake Worth Inlet, Palm Beach Harbor

Dear Mr. Busha:

The purpose of this correspondence is to register the Village of North Palm Beach's formal objection to Army Corps of Engineers' use of a portion of the Lake Worth Lagoon known as Turtle Cove for seagrass mitigation activities.

Last year, Palm Beach County applied for a permit from the Army Corps to cap approximately forty-two (42) acres of muck sediment with 640,000 cubic yards of sand within Turtle Cove in an effort to create 37.8 acres of seagrass habitat. A large portion of this area is located within the Village's boundaries and is immediately adjacent to two existing communities, Old Port Cove and Twelve Oaks, and one approved (although not yet constructed) multi-family development, the Water Club. In response to strenuous objections from the Village and other stakeholders, the County withdrew its permit application.

While the Village is unsure whether the mitigation proposed by the Army Corps is of the same magnitude as the County's prior application, the project raises the same concerns of negative impacts on both the adjacent properties and the Lagoon itself:

- The fill is likely to result in the accumulation of silt adjacent to the docks around the Lagoon, at the entrance to and within the canal leading into Little Lake Worth, and within the marinas at Old Port Cove and Twelve Oaks (and proposed marina at The Water Club), which lie directly in the path of the tidal flow. Obstructing the entrance to Little Lake Worth could result in a "dead zone" body of water. A prior fill operation near the Monastery property had similar impacts, even though this project was much closer to shore and out of the path of the tidal flow.

- The project could eradicate the existing sea life in the currently pristine Lagoon during the course of the project.

- The project would negatively impact navigation in the area, causing vessel congestion around the perimeter of the project. The project encroaches upon an existing, long-established marked and maintained navigation channel.

- The project would encroach on the riparian rights of surrounding property owners, decrease property values, and negatively impact the surrounding communities, requiring these property owners, including the marinas, to dredge and restore their waterfront.

Given that prior Munyon Island remediation projects have failed to substantially improve the aquatic environment, the Village is concerned that the proposed seagrass habitat will be neither viable nor nurtured. The Village does not believe that any potential benefits of the project, if realized, will outweigh the continued viability of Little Lake Worth, the impediments to navigation and the impairment of riparian rights in the general vicinity of the project.

Thank you for your cooperation in this matter. Should you have any questions relative to the foregoing, please do not hesitate to contact me.

Sincerely yours,

Darryl C. Aubrey
Vice Mayor

cc: Village Council
Ed Green, Village Manager

Federally Recognized Tribe Comment Letters

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE

SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM

30290 JOSIE BILLIE HWY
PMB 1004
CLEWISTON, FL 33440

PHONE: (863) 983-6549
FAX: (863) 902-1117

June 6, 2013

Angela E. Dunn
Department of the Army
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

THPO#: 0011857

Re: Lake Worth Inlet Feasibility Study, Palm Beach County, Florida

Dear Ms. Dunn,

The Seminole Tribe of Florida's Tribal Historic Preservation Office (STOF-THPO) received the Jacksonville Corps of Engineers public notice regarding the above mentioned project on April 22, 2013. The STOF-THPO has no objection to your proposal at this time. However, the STOF-THPO would like to be informed if cultural resources that are potentially ancestral or historically relevant to the Seminole Tribe of Florida are inadvertently discovered at any time during the construction process.

We thank you for the opportunity to review the information that has been sent to date regarding this project. Please reference ***THPO-0011857*** for any related issues.

Sincerely,

Alison Swing

Alison E. Swing, MS
Compliance Analyst
Seminole Tribe of Florida
30290 Josie Billie Hwy, PMB 1004
Clewiston, Florida 33440